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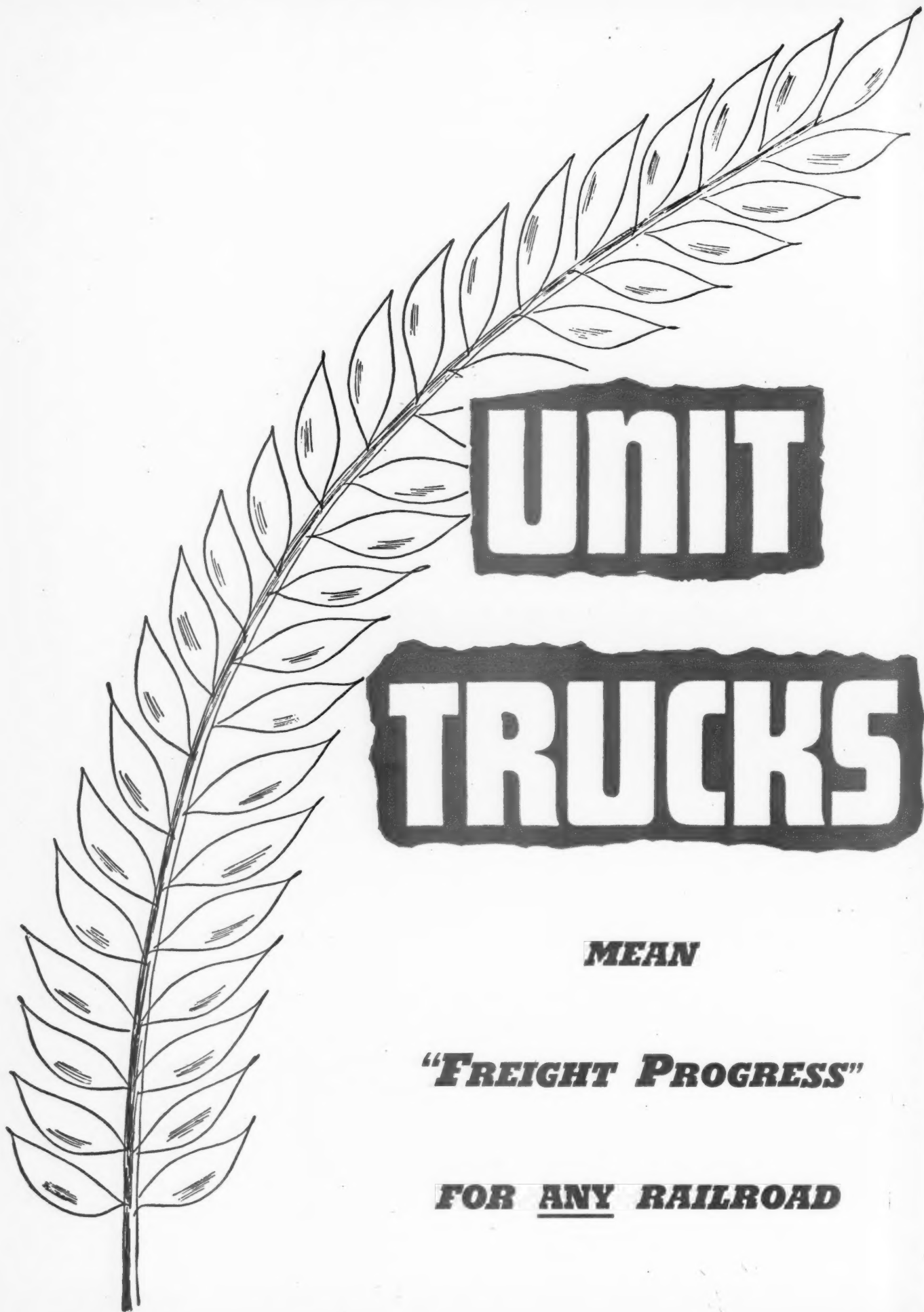
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Freight Progress Annual

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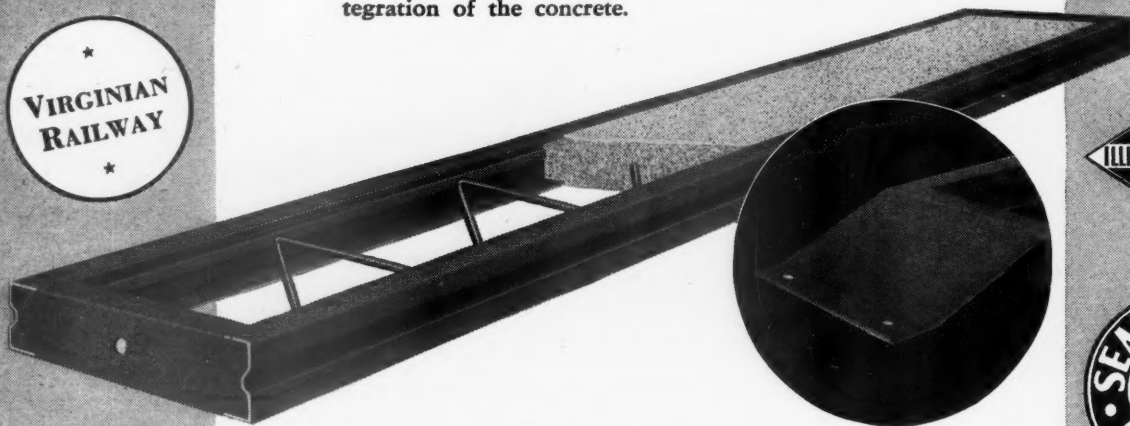
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RAILWAY AGE

Railway Earnings and Railway Needs

The Freight Progress Annual of *Railway Age*, of which this is the eighth issue, goes to thousands of shippers throughout the country. Shippers are interested in railway earnings. Net earnings indicate whether railway rates are adequate and determine how much the railways can spend for improving and increasing their service. And the railways now need to spend more than ever before to make their service adequate and satisfactory.

The last general advance in freight rates authorized by the Interstate Commerce Commission went into effect on January 1, 1947. Only earnings actually made can determine whether present rates are adequate. When this editorial was written statistics reporting net earnings derived from present rates for only the first quarter of 1947 were available. Net operating income of the Class I railways in the first quarter was about \$174 million, and was divided as follows between the railways of the three large districts: Eastern, \$39,424,330; southern (including Pocahontas region), \$54,997,096; western, \$79,206,878.

Net Operating Income at Rate of \$948 Million

What net operating income do these figures indicate that the Class I railways as a whole and the railways of the three districts will earn in 1947? "We have no light by which our feet are guided but the lamp of experience." Production, construction and traffic are being determined now by conditions of prosperity and peace. It seems reasonable to assume, therefore, that the trends of traffic and earnings during 1947 will be more similar to those in the decade 1921-1930, inclusive, than during the depression decade 1931-1940, inclusive, or than during the six years 1941-1946, inclusive, which included four years of war. In the decade 1921-1930, inclusive, the Class I railways earned 18.3 per cent of their average annual net operating income in the first quarter of the year. Net earnings in the eastern district were 18.9 per cent of the annual average; in the southern district, 23.7 per cent; in the western district, 15.6 per cent. If results throughout 1947 should follow the same pattern, net operating income of Class

I railways in 1947 would be about \$948 million divided as follows: Eastern district, \$209 million; southern district, \$232 million; western district, \$507 million.

Eastern Lines Lagging Badly

Table I gives average annual net operating income in the ten years 1921-1930, inclusive, and in the six years 1941-1946, inclusive, and compares them with the foregoing estimates for 1947. The figures show that the net earnings being made by the eastern lines are relatively much smaller than formerly as compared with those being made by the southern and western lines. To what is this due?

TABLE I—RAILWAY NET OPERATING INCOME

District	10-yr. Avg. 1921-1930, inclusive	6-yr. Avg. 1941-1946, inclusive	Estimates for 1947	% Inc.-Dec. 1947 over 10-yr. Avg.
Eastern	\$ 428,553,223	\$ 372,606,000	\$208,594,339	-51.3
Southern	194,453,746	226,023,000	232,055,257	+19.3
Western	394,371,222	470,903,000	507,736,397	+28.7
TOTAL	\$1,017,378,191	\$1,069,532,000	\$948,385,993	-6.8

It has been claimed by some and asserted by many that the railways derived earnings beyond the dreams of avarice from their hugely increased freight and passenger traffic during the war years. The facts show that they averaged \$1,017 million net operating income in the decade ending with 1930 and \$1,070 million in the six years ending with 1946, an increase—including results of the war years—of only 5 per cent. They also disclose that the eastern lines made substantially less average annual net earnings in the six years ending with 1946 than in the ten years ending with 1930.

Traffic Increases Smaller in East Than in South and West

Many raise questions as to why the eastern lines, with relatively about the same recent advances in freight rates, are making so much poorer earnings than the railways in other territories. The principal explanation is that traffic in the eastern district has increased relatively much less since the '20's than in the south and west. Freight traffic (ton-miles) in the eastern district was 2 per cent larger and in the southern and western districts, 10 per cent larger in 1941 than in 1929. At its

wartime peak in 1944, freight traffic was 46 per cent larger in the eastern district than in 1929; in the southern district, 57 per cent larger; in the western district, 92 per cent larger. Freight traffic of all Class I railways was 51 per cent larger in January, 1947, than in January, 1929. But the gain in the eastern district was only 26 per cent as compared with gains of 62½ per cent in the southern district and 75 per cent in the western district. Also in January, 1947, passenger traffic (passenger miles) in the eastern district was only 45 per cent larger than in January, 1929, as compared with gains of 100 per cent in the southern district and 79 per cent in the western district.

In brief, the railways in the eastern district have had since the Twenties about the same increases in unit costs of labor and materials and about the same changes in their rates as the railways in the other districts, but the increase in their passenger traffic has been relatively only about one-half as large and the increase in their freight traffic only about 40 per cent as large. Hence, in the first quarter of 1947 their gross earnings (total operating revenues) were only 22 per cent larger than in the first quarter of 1929, as compared with increases of 57 per cent in the southern district and 49 per cent in the western district.

Net Earnings Determine Railway Spending Power

The Class I railways would be making net operating income at an annual rate of \$1,278 million if the railways in the eastern district were showing gains relatively as large over the 1921-1930 annual average as those being made in the southern and western districts. This would be 35 per cent more than they are making now but only 0.2 per cent more than the \$1,275 million they made in 1929 when freight and passenger traffic were only two-thirds as large as now.

The nation has been suffering for months from the most acute shortage of freight transportation in its history. This condition can be remedied only by large expenditures for railway improvements and expansion or by a recession in general business of which there is now no prospect and which probably would be brief. How much the railways spend for improvements and expansion is determined only partly by the demands of traffic, and much more by how much they *can* spend. And how much they can and do spend is determined over periods of years by how much net operating income they earn. This is clearly shown by statistics given in Table II comparing average annual net operating income and average annual expenditures for equipment and materials (exclusive of fuel) in the decades 1921-1930, inclusive, and 1931-1940, inclusive, and in the six years 1941-1946, inclusive.

TABLE II

	Average Annual Net Op. Income	Average Annual Expend. for Equip- ment & Materials	Ratio of Expend. to Net Op. Inc.
1921-1930, inc.	\$1,017,378	\$1,539,361	1.51
1931-1940, inc.	520,507	617,612	1.19
1941-1946, inc.	1,069,532	1,302,580	1.22

Demands of Traffic Require Larger Net Earnings

When net operating income declined almost one-half during the depression, expenditures for equipment and materials declined relatively more. When net operating income increased during the last six years, expenditures

for equipment and materials increased relatively more. And these expenditures would have increased still more within the last six years excepting for government restrictions on railway buying during the war and for the inability of the railways and of manufacturers of railway equipment and materials to get enough steel and other things to fill orders they have actually placed since the war and are still placing.

It is quite evident, however, that the railways as a whole, especially the eastern lines, must make much more net operating income for a period of years than they are making now if they are going to be able to buy enough equipment and materials to meet such increasing demands of traffic as are now being made on them. And, while passenger traffic is declining, freight traffic is as yet showing no tendency to decline. The shortage of freight cars tends to become worse, and, if traffic continues large, cannot and will not be remedied without record expenditures for years for new freight cars and new locomotives and for expansion of all fixed structures used in assembling and moving cars and trains.

Decline in Value of Money Important Factor

It is in this connection a fact of the greatest importance that the purchasing power of the railroads' dollar as well as of everybody else's dollar has greatly declined. An annual net operating income of \$1,500 million probably would not have any more purchasing power now than the average of \$1,000 million net operating income that was earned in 1921-1930. History proves that the railways needed the annual average of \$1,000 million net operating income that they earned in 1921-1930 to enable them to make the average annual expenditure of \$1,500 million for equipment and materials that they made during that decade. The way that production, construction and traffic have been increasing indicates that the needs of the railways during this postwar period will be greater than during the last postwar period. Estimates that they will need to spend over \$2,000 million a year for equipment and materials and that they will require an average net operating income of \$1,500 million now seem reasonable.

Economies and Expansion Demand Huge Investment

Comparison of these figures with our estimate that the railways earned at an annual rate of less than \$950 million a year in the first two months of 1947 indicates that the transportation situation with which the nation is confronted is much more serious than is realized even by most persons who believe themselves familiar with it.

The railways can in time effect economies tending to increase their net earnings, as they always have. But how large economies they can make, as well as how much they can expend, depend principally on how much capital they can invest. This, in turn, depends on how much net operating income they earn. It is plain that many important railways cannot, with present earnings, economize and expand fast enough without further advance in their rates. And any such increases in the wages of railway employees as are being made in the wages of employees of other important industries would render much more imperative large advances in present railway rates.

Shippers Can Determine the Quantity and Quality of Railroad Service

Larger capital investment is required and only the business community can establish policies to enable the railroads to raise such funds from private sources

PRACTICALLY all shippers and receivers of freight are justifiably disturbed by the present car shortage, and critical of those who might have alleviated it and have been so slow to do so. Nobody doubts, however, that this shortage will be relieved before many months have passed. The car shortage, that is, is an acute illness—it isn't a chronic disease.

Not so many shippers and receivers are worried or excited about another transportation shortage, which is more fundamental than the car shortage but does not hurt so plainly; and is more likely to lead to fatal consequences because only the alert and far-seeing are likely to be aware of it. This shortage is the shortage of dollars being invested in that part of the nation's transportation plant which is owned exclusively by private capital—that is, the railroads.

Plant Too Small for the Job

The book value of the investment in railroad property, less depreciation, was \$20 billion in 1921. By 1930 it had risen to \$24 billion. At the end of 1945 it was less than \$23 billion. The biggest year for railroad traffic before the recent war was 1926 (that is, measuring traffic in "traffic units," consisting of revenue ton-miles plus two times passenger-miles). Each billion dollars of depreciated railroad investment in 1926 produced 23 billion traffic units. In 1945 each billion dollars of depreciated railroad investment was forced to produce 38 billion traffic units. The existing railroad plant is being overworked. There is not enough plant being added in ratio to the increased volume of service the public wants the railroads to provide. The shortage in the inflow of new capital into railroad property is a real and dangerous malady of which the shortage of freight cars is one of the symptoms. It is no temporary condition but has been going on since 1930.

There has been so much talking and writing and figuring about the "transportation problem" and the "railroad problem" in the past couple of decades that most people who cannot make a full-time job of delving into the chaotic

mass of words and figures are frightened away from trying to grasp the situation at all. Actually, all the complexity and conflict which has arisen in this discussion come from the injection into it of notions of what is "fair" or "reasonable" or "in the public interest." These ideas are subjective—no two people have in mind exactly the same things when they use such terms.

The problem can be made much easier—both to understand and to solve—by observing one simple rule, viz.: Quit applying the test of whether a policy or a proposal is "fair" or "reasonable" and instead, just ask this question about it: *Does it work?* Does it produce the results that the shipping community wants?

The shippers and receivers of freight in this country have made it clear that they want two things from the transportation industry, and especially from the railroads: (1) adequate and economical service at all times—plus assurance of the continuance of such service in future; and (2) the provision of this service under private rather than government ownership.

Experience since the beginning of the war shows conclusively that present railroad plant is inadequate to the maximum demands of the country for railroad service. That is, the country's present handling of its railroads *doesn't work*. The figures on the depreciated investment in railroad property given above, i.e., \$24 billion in 1930 and less than \$23 billion in 1945, mirror the shrinkage which occurred in railroad facilities when actual experience has shown that these facilities should have been greatly increased.

One of the accompanying charts shows average Dow-Jones index prices of railroad stocks, compared with those of industrial companies, indicating that prices of railroad stocks were well above 100 during most of the period 1921-30, when depreciated property investment in railroads rose \$4 billion. The chart also shows that average railroad stock prices have been far below 100 in the period since 1930 when total depreciated investment in the railroads has been declining. The fact that two events coincide does

not prove that one of them caused the other—but the optimism which pushes up the price of the stock of a company is the same emotion which causes the management of that company to want to enlarge and improve its plant. The reason investment in the railroads did not rise during the Thirties was because both investors and management were skeptical of the profitability of additional large outlays in railroad property.

But back in the Thirties there were many who doubted that the country would ever again need as large a railroad plant as it had. That doubt has vanished—but still the price of railroad stocks stays at the poverty-stricken levels which obtained when people were thinking they could get along with reduced railroad service. Private capital, that is, continues to be scared of railroad investments—not now because it is afraid the railroads are going to quit operating, but because it doesn't believe that, even with heavy traffic, railroad capital is going to be allowed to earn as much or be as safe as that which goes to work in some other industry.

The Least Profitable Industry

Why does investment capital believe its chances for safety and satisfying earnings are less in the railroads than in other industry? The answer can lie only in two considerations, viz., (1) past performance and (2) the general "climate of opinion" as to the industry's future prospects. The railroads in 1946—according to the calculation of the National City Bank of New York—earned 2.6 per cent on their "net worth." The earnings of the manufacturing industry, calculated in the same manner, were 12.1 per cent in 1946. The service and construction industries earned 19.4 per cent. The utilities earned 8.2 per cent. Even the coal mines, so beset by labor troubles, earned 7.5 per cent.

The railroads' earnings were so meager because their rates were not high enough—in relation to their costs. Why were their rates not high enough? The quick answer to that question—but it is only a partial answer—is that the Interstate Commerce Commission was

unconscionably slow in granting rate increases after the railroads had requested them. But this is only part of the answer, because railroad earnings in 1947 are still not sufficient to earn a return attractive to capital and railroad stock prices are still depressed, even after the I. C. C. has granted practically all the increases the railroads asked for. The railroads did not even ask for rate increases sufficient to offset their increased costs, and the probable explanation is their fear (a) that neither the I. C. C. nor the shipping community would have acquiesced in granting them really adequate increases and (b) that such increases might have driven so much traffic to agencies of transportation using plant provided by government that the railroads could not carry large rate increases over into net earnings. Since 1938, however, the general level of prices has risen 80 per cent and the

average railroad revenue per ton-mile only 4 per cent, so a further substantial increase in freight rates could doubtless be effected without accelerating the diversion of traffic to other carriers.

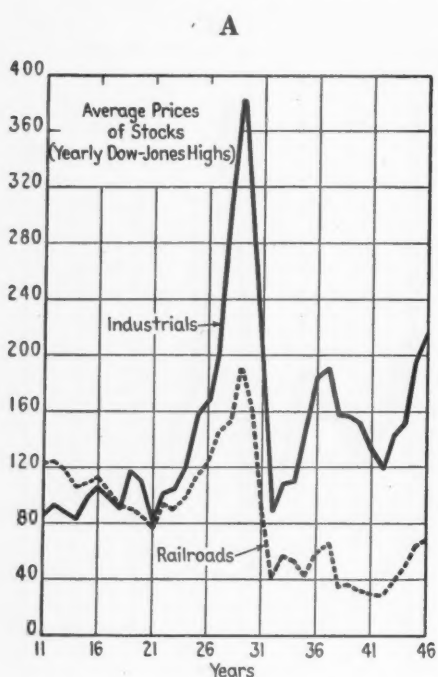
Nevertheless, the *threat* of still more expenditures on government transport plant, or a large and arbitrary reduction in the charges made for the use of this plant, jeopardizes the profitability of practically all investment in fixed railroad property. In this government-financed transport plant — offered to users either free of charge (e.g., waterways) or at fees which do not total as much as full costs (e.g., highways and air transport facilities)—must lie at least one of the basic causes both of the railroads' present poor earnings, and of investors' fears as to future earnings.

What investor in his right mind would use his savings to build an office building if there was a good chance that Uncle Sam might put up a competing building across the street, and offer it rent-free to the private investor's tenants? This is the way any private investor is bound to feel about putting money into fixed railroad property, until some settled policy is generally agreed upon about

the public money going into transportation plant. For example: What is the "ceiling" going to be on outlays of government funds for transportation plant; and what is the "floor" going to be on the ratio of the cost of such plant which the government will neglect to collect from its users?

Until definite answers are given to these questions, it is improbable that investors would be attracted to the railroads in substantial number even if current earnings should rise to a remunerative rate. As proof of this, let it be remembered that railroad stocks did not get out of the poverty-stricken level even with the substantial wartime earnings.

Other explanations than the competition of government plant and inadequate rates have been sought from time to time in the effort to account for the unattractiveness of the railroads to investors. Some contended that the nation was no longer going to need a railroad plant as large as that available in the Thirties, but events have disposed of that one. It was alleged that the railroads were over-capitalized, especially as regards their indebtedness, but both debt and total capitalization have been drastically re-

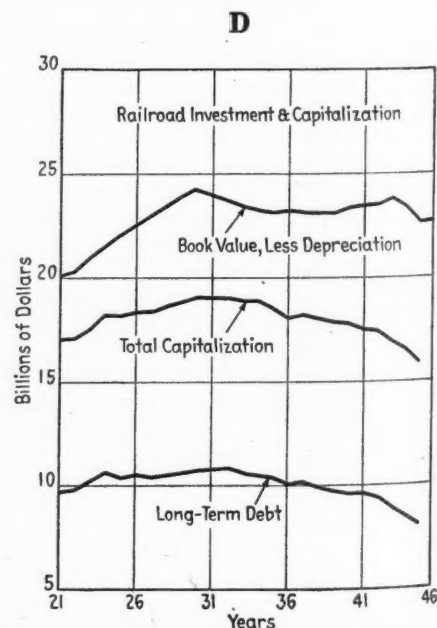
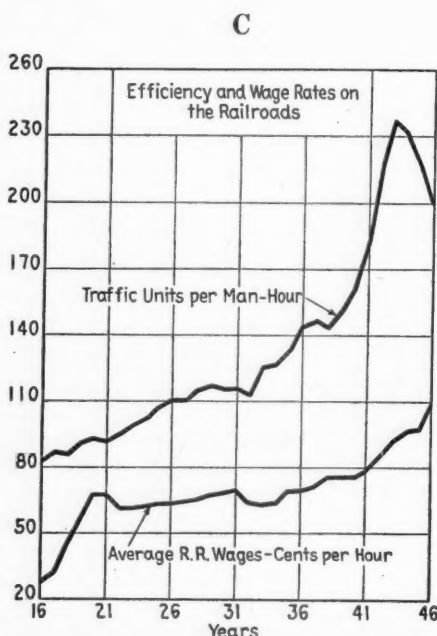
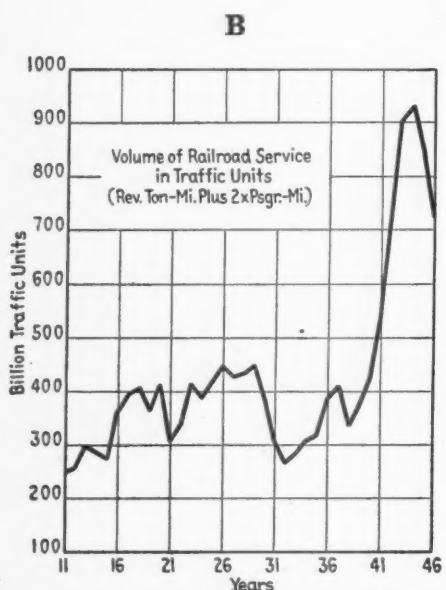


A—Railroad stocks have persistently sold far below 100 on the Dow-Jones scale for the past 16 years—minimizing the incentive for additional capital investment.

B—The growth of demand for railroad service indicates the great need for large additional capital investment for plant improvement and expansion.

C—Railroad wages have increased tremendously, but technological and managerial efficiency has achieved large and steady economies in the utilization of the working force.

D—Investment in railroad properties has lagged since the Twenties—but railroad capitalization has grown steadily sounder and more conservative.



duced. Others asserted that the railroads were technologically backward—but, as portrayed in an accompanying chart, traffic units of railroad service per man-hour have gone up steadily. Railroad wages have been greatly increased, but the chart shows that management has been able to secure economy in the use of labor more than sufficient to offset the increased unit costs of labor. Other industries have also had higher wage costs to meet, but their net earnings have not suffered and their stocks are selling at high average prices. The railroads show none of the signs of economic old age—either a declining demand for their services or a slowing down in the rate of increase of their efficiency.

Examination of all possible reasons, such as the foregoing, as to why the railroads should be less profitable and less attractive to investors than, say, the manufacturing industry eliminates all these possible reasons but two. These are (1) severity by the Interstate Commerce Commission in its regulation, especially in its limitation of rates, and (2) the competition of government-owned plant. These are the only two factors which can explain the unfavorable economic standing of the railroads, as compared to other industry, because they are the only untoward factors which afflict the railroads and not other industry.

It has already been shown in the foregoing, however, that—while the I. C. C. took its time about increasing rates in 1946—it actually did raise them, and still the railroads are not making enough money and do not offer a sufficiently assured future to induce investors to push railroad stocks up to 100 or more on the Dow-Jones index. Since that time, however, the general-price level has continued to rise and Congress enacted the Crosser Bill, greatly increasing railroad labor costs. Thus, inadequate rates plus the competition of government-owned transportation plant—and the uncertainty as to what future government policies will be as to the size of its investment in transportation plant, or its future charges for the use of such plant—are the sole possible basic explanations of low railroad earnings in a time of good business; and of the failure of private investment capital to seek employment in the railroad industry on a scale necessary to provide efficient service adequate to all demands.

It is industrial and commercial people, almost exclusively, who determine governmental policy on rates and toward outlays upon and charges for government transportation plant. The man in the street does not interest himself in "toll roads versus free roads," or in dredging out rivers to make toll-free canals of them; or in municipal, state or federal development of airports. It is always some industrial or commercial group

which initiates and fosters such projects.

No question is here raised as to the "fairness" or "reasonableness" or the "public interest" of the policy, or lack of policy, being pursued by government as regards transportation. The only criterion of judgment is this: Are the policies governing government investment in transportation—which policies are largely controlled by business—operating to provide the business community with the quantity and quality of railroad service it wants, under private ownership? The evidence adduced argues strongly in the negative. The analysis may be summarized as follows:

How to Get Adequate Plant

1. The business community, in its own interest, wants a larger and more adequate railroad plant than is now available, and wants private enterprise to provide it.

2. Large additional private investment in railroad facilities, especially in fixed property, is difficult if not impossible to secure when railroad earnings, and opinion as to the safety of principal, are such as to keep railroad stocks persistently at levels far below 100 on the Dow-Jones index, where they have remained for 16 consecutive years.

3. An examination of all the possible factors in sub-standard railroad earnings, and anxiety as to the safety of principal invested in railroad plant, shows that only one of these factors, alike of low earnings and insecurity of principal, affects the railroads and not other industry also. It, therefore, must be the primary cause both of the low earnings of the railroads and of the unpopularity of their stocks with investors even when earnings are substantial (e.g., as during the war). This factor is the government policy toward rates and of providing competing transport plant, with low and unpredictable charges for its use.

4. But government policy as to rates and the provision of transportation facilities from the public treasury, and charges for the use of such facilities, are matters in which the political and regulatory authorities are guided principally if not exclusively by the business community, i.e., by the shippers and receivers of freight.

5. It follows that it lies within the power of the business community to promote a more reasonable policy as to rates and to bring about a firm and dependable public policy to control the size of government expenditures for transportation plant, and to regulate the charges for its use, in a manner to safeguard the earnings and restore confidence of private investors in transportation, viz., in the railroads.

6. Experience during the Twenties

showed that, when the stock market appraises railroad stocks at substantially above 100 on the Dow-Jones index, large-scale capital expenditures follow automatically—because the same optimism regarding the future security and earnings of railroad investments, which pushes railroad stocks above 100, also animates railroad management, leading it to conclude that substantial expenditures are warranted by prospective earnings. Since it lies within the power of the business community, as demonstrated above, to restore the earnings of the railroads and confidence of investors in their stocks, it follows that, by the same token, it lies also in the power of the business community to revive large capital expenditures in railroad plant.

7. Such revival of private capital investment in railroads on a large scale would give the business community the enlarged and improved railroad service it requires—and would accomplish this result without resort to government financing or other government assistance and, hence, would strengthen and perpetuate private enterprise.

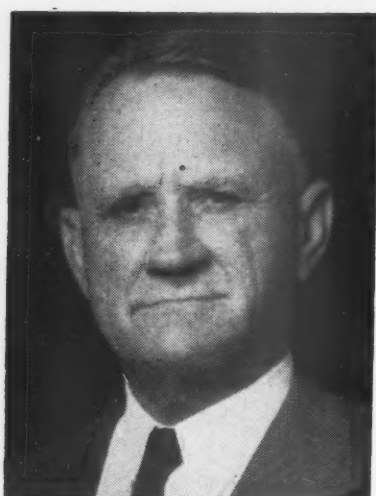
One or two footnotes may be added to the foregoing outline. One is that it might not be necessary to place highways, waterways and airports on a basis of complete self-support from charges levied on users in order to accomplish the required degree of restoration of railroad credit. Since the analysis here does not rest on debatable concepts of what is "just" or "reasonable," but solely on the question, *does it work*, it would be necessary to inject only that degree of dependable self-support into government-owned transportation facilities which experience would show to be necessary to restore railroad stock prices to healthy levels.

Another observation is that a few railroad men—a very few—having become weary of the endless argument about what is "fair" or "just" in competition between government and privately-owned transportation facilities, propose that the railroads offset the handicap of competing with the public treasury by becoming super-efficient; consolidating on a wholesale scale; abandoning all light-traffic lines, etc. Without questioning whether or not considerable economies might be achieved in this manner, the lesson of actual experience is that no amount of efficiency by private enterprise can serve to meet the competition of unlimited expenditure of public funds.

When railroad efficiency cut into the traffic of the old Erie canal, the state abolished the canal tolls. When railroad efficiency rose so that even the toll-free canal could not attract traffic, the state built the modern barge canal, toll-free, to replace the Erie canal.



William T. Faricy



Col. J. Monroe Johnson



Alonzo Bennett



Carl Giessow

Cooperation Is the Key to Progress

Leaders in joint endeavor for the improvement of transportation service report on how things are going in their respective domains, and how the future looks to them

As for the Railroads

By WILLIAM T. FARICY
President, Association of American
Railroads

PROGRESS in freight transportation is measured in performance.

The prime outstanding fact in present-day freight performance is that the railroads, with the cooperation of the shippers and receivers of freight, are moving more tons more miles than were ever moved before in time of peace.

The second outstanding fact is that this is being accomplished with far fewer cars than in the previous peacetime peaks of 1926 and 1929.

It is not, however, being accomplished without car shortage and difficulties due to lack of a sufficient number of cars. For this lack there is a reason, or rather a series of reasons, in the history of rail transportation during the past twenty years. And there is a remedy for the future, which is being applied as rapidly as conditions permit.

In 1929, the last peacetime peak year, the railroads had 2,269,000 cars and transported 447 billion ton-miles of freight. Then came the long depression. Ton-miles transported went down to a low of 234 billion in 1932, and even after partial recovery stood at only 290 billion ton-miles in 1938. The number of cars in service declined year by year, as older cars were retired faster than new ones were built—but, even so, there was at all times a surplus of cars, averaging in the hundreds of thousands daily. There was such a surplus, in fact, that it came to be a favorite intellectual exercise in some quarters to lecture the railroads for being overbuilt, and representing an excessive investment, never to be used again.

In 1938 proposals were made that the government build several hundred thou-



William C. MacMillen, Jr.

sand cars and lease them to the railroads, not so much as a measure of assistance to the railroads as a pump-priming device to increase employment in other industries. When it was found that there was no law for such a practice, the idea was written into the Lend-Spend Bill of 1939 which, however, did not pass. All this, it will be recalled, was

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before war began in Europe. With the approach of war, in September, 1939, the railroads began to build up their car supply, and between that time and Pearl Harbor, a period of a little more than two years, they added 158,000 new and rebuilt cars to the serviceable carrying fleet at the disposal of the country.

In the spring of 1941, six months before Pearl Harbor, it became impossible to get steel for car building except upon government priority and allocation. This condition continued throughout the war, with the result that railroads and shippers, including the government itself, had to accomplish the miracle of wartime freight movement with a car supply little greater than it was in 1941.

With the end of hostilities, the character of traffic changed. The heavy loaded, long haul, concentrated traffic of wartime was succeeded by relatively lighter loading, shorter hauls and more diversified and diffused traffic of peacetime. On the other hand, the tightness of the supply of steel and other car-building materials continued, so that, since the war, the number of new cars built and put into service has averaged only 3,084 per month—not much more than half as many as the cars worn out in war service, which have had to be destroyed in the same months.

Nevertheless, doing to the best of their ability what had to be done with the means at hand, the railroads have moved in recent months more grain and grain products than ever before in corresponding periods; more perishables, more l.c.l. freight, more of many other important commodities. They are doing it by getting approximately twice as much service per day out of the average freight car, and more than twice as much service per hour out of the average train, as they did in the years just after the first World War. That's progress.

Underlying this progress there is investment of railroad funds—more than half a billion a year, on the average, for the past 25 years. To continue such progress there needs to be continued investment at some such rate. Such investment will be made if there seems to be a reasonable opportunity for adequate railroad earnings.

The railroads know, better than anyone else, how vital to this nation is the free and unobstructed movement of rail freight. They know, better than anyone else, that there still are slack spots in freight performance which can be tightened up, but they know, also, that to handle such production and traffic as is now moving they need more cars. They have placed orders for such cars, therefore, and have others ready to place, which will keep the car-building plants busy for more than a year to come, even if the anticipated production of 10,000 new cars a month is attained this summer, as is expected.

The O. D. T. Viewpoint

By COLONEL J. MONROE JOHNSON

Director, Office of Defense Transportation

IT gives me pleasure to present a short message to the railroad industry through the medium of *Railway Age's* Freight Progress Issue.

As the days go by the transportation detail of the recent war is becoming misty. In retrospect we wonder how this phase of the global struggle was accomplished. That it was successfully consummated is a tribute to everybody directly or indirectly connected with the railroad industry. It emphasizes an outstanding characteristic of the people who are this nation, that, as a nation, it may divide on many fundamental issues but that it can and will unite in a useful common cause. One lesson we learned above all others from this most recent war is that the railway plant will for many years be the backbone of our economy both in war and peace. It must be retained intact at all costs.

The railroad crisis is becoming more acute day by day. The carriers have been for some time, and are now, laboring to provide transportation for an economy converted from war to peace. Pent-up consumer needs have ballooned demands for cars to unexpected proportions. In addition to there being too little equipment, the existing equipment is worn and depleted due to abnormal and unmerciful use during the war.

Even though the railroads have been confronted with the greatest transportation demands since 1930 they have been supplying cars for only about 85 per cent of the country's needs. The progress of the nation has been retarded appreciably by the inability to provide cars for the additional 15 per cent.

We are entering a year in which the transportation crystal-gazers have prophesied that the tonnage to be transported will be 10 per cent greater than that in 1946. If this forecasting is correct and consideration is given to the attrition in car supply, plus the criminally inadequate ownership of cars, the railroads must by some alchemy do even better than last year.

Irrespective of the records established by the carriers over the past few years, the inability to meet the demands of the shipping public will bring unrestrained criticism upon the railroads. In fact, the criticism might very easily be seized upon by those in favor of government ownership. Such clamor may be difficult to assuage.

I have been laboring with the problem of meeting shipper demands with an inadequate and depleted car supply for several years. Instead of becoming easier the situation has become progressively worse. Our minimum 10,000-cars-per-month building program has promise but, if realized, it will be many years at even that rate before the situation is again normal.

Rigid measures to conserve cars must be continued. Perhaps additional measures will become necessary. No stone may be left unturned to save cars and car-days.

Every person connected with the railroad industry should put forth additional effort and make railroad performance even better than last year. Only by concerted efforts can we stem the tide of criticism that is sure to follow unsatisfied needs of the shipping public.

Industrial Shippers

By ALONZO BENNETT

President, National Industrial Traffic League

AFTER an amendment to the Interstate Commerce Act, known as the Hepburn Act, was passed by Congress in 1906, a small group of industrial traffic men in the city of Chicago began conferring with each other, comparing notes and seeking light as to the application of this new transportation statute to their particular industries. Word of these round-table discussions spread to traffic

men in other cities. They, too, were concerned with these new practical traffic problems. A general meeting of industrial traffic men was called for August 2, 1907, in Chicago. Thirty-four traffic men from various sections of the country responded to that summons. As a result of this informal gathering a permanent organization known as the National Industrial Traffic League was perfected,

and officers were duly elected. Thus was born a national organization of shippers which today is recognized far and wide by federal and state agencies and all forms of transportation, as spokesman for shippers on general traffic and transportation subjects.

The object of the league is to promote adequate national transportation, to interchange ideas and information concerning traffic and transportation matters; to cooperate with the Interstate Commerce Commission and other regulatory bodies, both federal and state, and the transportation companies, in developing a thorough understanding by the public, the carriers and the national and state governments, of the transportation requirements of industry; to obtain legislation that will be helpful to commerce, and to secure the modification of laws, rulings and regulations that may be found harmful; and to promote cordial relations between shippers and carriers. Its activities are confined to matters of national interest. Its slogan is "Promoter of Sound Economical Transportation."

The league has 1,350 members, representing 350,000 buyers of transportation, and its membership is distributed in forty-seven of our states. Its membership comprises practically every line of industry throughout the country and its members are interested in all forms of transportation. The membership representatives are traffic experts.

The league has cooperated closely with railroads and other forms of transportation through conferences from time to time of appropriate committees. It takes an active interest in transportation legislation and often appears before the Senate and House committees in the welfare of its membership.

It has twenty-three standing committees, ten special committees and about ten subcommittees and, at present, the personnel of these committees consists of 557 members. The executive secretary assigns to the appropriate committees all proper and relevant matters presented by the membership and others for consideration by the league, and all subjects are handled with dispatch.

While all committees have been active, one of the most active committees, since the war started, is the special committee on "Emergency Transportation Matters." It had numerous meetings during the war with various governmental agencies that had anything to do with transportation with the view of assisting in the necessary transportation for processing a successful conclusion of the war, and it has been very active since hostilities ceased in its endeavors to maintain adequate transportation to conserve the national economy, especially in connection with the extreme current car shortage and transportation services.

Its standing committee, known as the "Legislative Committee" has been extremely active in legislative matters during the past few years—this is likewise true of its special committee on "Ex Parte 148, 162, 163," Rate increases. This does not mean that the other committees have not been active, for all of them have had many problems to handle and progress.

The league has been very active since its organization, especially so since transportation problems seem to be on the increase.

Incidentally, the opinion is shared by many that the league is primarily responsible for putting the traffic department in an executive position equal to the sales and purchasing departments of the principal concerns of the nation.

Carrier-Shipper Collaboration

By **CARL GIESSOW**

*President, National Association of Shippers
Advisory Boards*

COOPERATION pays big dividends. Demonstrating this fact are the results achieved through the cooperative efforts of the National Association of Shippers Advisory Boards, its 13 regional advisory boards with a membership of over 22,000 shippers and receivers, and the transportation agencies, and particularly the railroads.

These results are the more remarkable because they have been achieved between interests of apparent conflict namely, buyers and sellers of transportation.

The advisory board movement developed from the inspired thinking of the late M. J. Gormley, Donald D. Conn and Warren S. Kendall, who conceived the idea that there was a field in which the shippers and the railroads could effectively cooperate and thereby promote their common interests. The field was that of car distribution and service. It was felt that, if the carriers could receive from the shippers advance quarterly estimates of their freight car needs by territories and commodities, steps could be taken by the carriers to see that the cars were at the right place at the proper time to meet shippers' loading requirements and that severe car shortages which had been experienced during and following World War I, due largely to dislocation of equipment, could be averted.

Thirteen regional advisory boards were established starting in 1923. These boards are autonomous in character. Their respective jurisdictions are co-extensive with the thirteen districts of the Car Service Division of the Association of American Railroads. In 1936 the National Association of Shippers Advisory Boards was organized. It serves as a coordinating agency for the regional boards and exercises only such authority as is conveyed to it by its regional constituents. Its actions are on a national level, while those of its members, the

regional boards, are on a regional level.

In the beginning the boards confined their activities largely to the advance estimating of car requirements and discussion with railroad transportation men of service problems. From this beginning the sphere of activity has broadened until today practically all matters, except rates and charges, are dealt with. The accuracy of estimates of equipment needs over the years has been so marked that they are generally accepted as reliable business barometers, and, until recent years when car supply through no direct fault of the railroads became wholly inadequate to meet the demands for transportation, enabled the railroads to place their equipment where and when needed with virtually no shortages of equipment anywhere.

When, following the start of World War II in Europe, it became evident that the transportation load on the railroads would materially increase, the advisory boards sponsored a program for heavier loading of equipment. They also set up in the larger terminal areas car efficiency committees designed to secure prompt forwarding of cars and their prompt and clean unloading and release. The work of these committees has been outstandingly successful and has made possible the handling of a record volume of traffic with a limited amount of power and equipment. In 1936 claim prevention activities were also undertaken which have helped to keep down the claim account of the carriers and the dissatisfaction of their patrons. Originally undertaken as a one-month campaign designated April Perfect Shipping Month, this activity is now on a year-round basis with active committees of shippers and the transportation agencies working closely together.

The shortage of railroad equipment which has now existed for approximately a year and a half has brought many complaints. This shortage of

equipment is due to two basic factors, neither of which can be charged to the railroads. One of them is the record volume of traffic seeking movement. The other is the inability of the railroads to secure equipment and material during and following the recent world war to maintain and renew their rolling stock, due to the channelling of steel and other materials by governmental direction into other uses. Only very recently has this been overcome, largely through the efforts of Colonel J. M. Johnson, director of the Office of Defense Transportation, who has been instrumental in working out a program under which the railroads should be able to acquire 10,000 cars per month starting in June of this year.

The railroads propose to utilize this

program. On April 15 they had 97,914 freight cars on order and undelivered. Assurance has been given that additional orders will be placed as soon as necessary details can be completed to bring the total up to 131,600 cars.

An average of 10,000 cars per month starting in June will be of material help. However, even with the increased efficiency in handling on the part of the railroads which should come with good weather, cars will continue tight for many months to come. So long as this situation prevails the advisory boards will continue their car efficiency activities as well as their other activities which have made cooperation with the carriers succeed.

This cooperation has paid big dividends to both shippers and carriers.

tion on their comments regarding railroad service—either good or bad. The new department will directly contact any and all railroads on behalf of members, either to compliment the railroad president for a good job as reported by travelers, or to suggest action be taken to improve conditions if the comments of members indicates specific instances where railroad service has not been up to the standards of good, progressive railroading.

In connection with this new department, the F. R. P. has announced that an annual award will be made to the railroad whose efforts during the previous year have been most outstanding in the public welfare. This trophy will become, F. R. P. officers believe, a coveted recognition of railroad progress.

Indicative of the interest of the federation in the shipper is the exhaustive study of the current freight box-car shortage, contained in the group's monthly magazine, "Railway Progress." This article provides a summation of the voluminous testimony, and appropriate conclusions, presented the Senate investigating committee in Washington recently, in which the Senate group delved into the immediate and long-range reasons for the paucity of box cars at a time when the nation's reconversion to peacetime pursuits is most in need of adequate transportation facilities.

Further articles will be published in the organization's magazine that will demonstrate that the shipper has long been ignored by the industry as other transportation media have progressed.

The federation, still only a matter of weeks in age (it was founded by Mr. Young late in February), has indicated that it will carry the banner for shippers as well as passengers in its search for more progressive means and methods in rail transportation.

A Newcomer in Our Midst

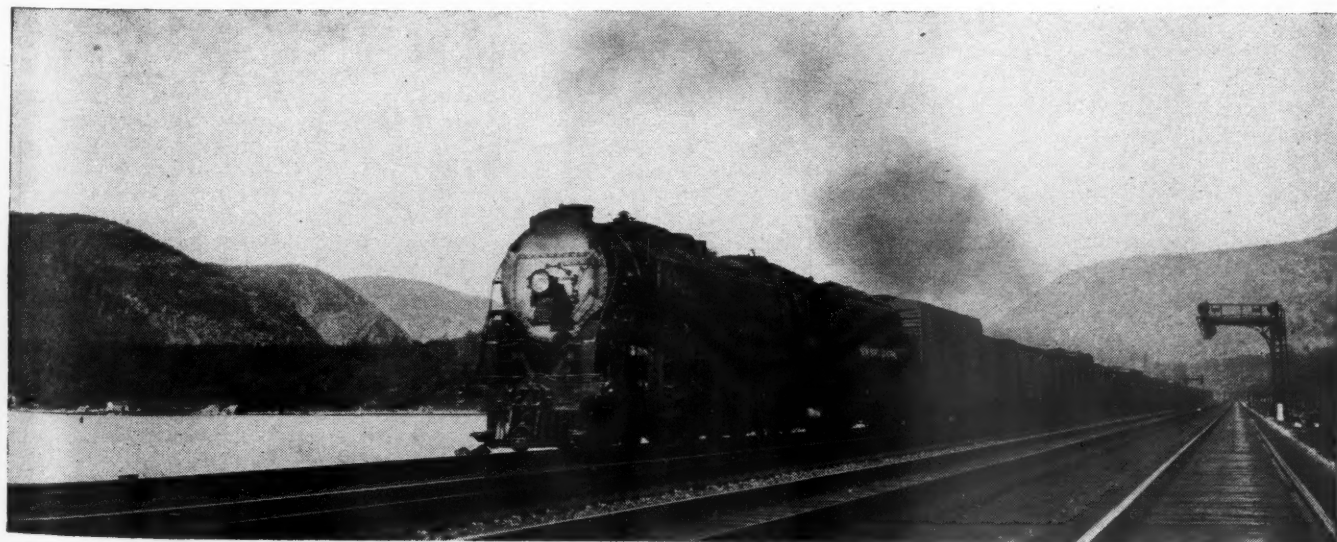
By **WILLIAM C. MacMILLEN, Jr.**
President, Federation for Railway Progress

WITHIN the near future steps will be taken by the Federation for Railway Progress—the new organization sponsored by Chairman Robert R. Young of the Chesapeake & Ohio Lines—to delve into the problems of the shipper with exactly the same determination that has motivated steps on behalf of the railroad passenger.

Rapidly growing until at present its membership exceeds 12,000, the federation was founded as a voluntary, unincorporated, non-profit association designed to benefit and represent every segment of the railroad industry. As such, the problems peculiar to the transporta-

tion of goods will receive an equal amount of attention as the problems facing the transportation of people. In the more dramatic steps already taken on behalf of the railroad traveler, the F. R. P. points to the results achieved through aggressive action in eliminating the black market in Pullman reservations, the establishment of through coast-to-coast passenger cars, and the forcing of competitive bidding for rail securities.

Newest of the federation's proposals on behalf of the rail passenger is the recently-announced establishment of a Passenger Relations Department, through which members can achieve ac-



"Main-trackers" move at passenger train speeds

"Bouquets and Ripe Tomatoes"

Eleven prominent representatives of the traffic profession say what they think of railroad service—No holds barred

NO one is better qualified to pass judgment on the transportation situation—no one more deserving of a voice in what it should offer—than the industrial traffic manager. He determines what mode of transport will move his freight, and how it shall be routed. He pays the bill.

It is timely, therefore, that we set forth in this "Freight Progress Annual" the considered statements of a cross section of these "routers-in-chief" in answer to the query, "What do the shippers think?"

One traffic manager of a very large eastern firm, a man with 45 years' combined railroad and industrial traffic service, replied that he was not prepared at this time to make a statement for publication. "I am somewhat optimistic by nature," he writes, "but am frank to say that the transportation situation today leaves a good deal to be desired. I wish it were not so fascinating because that is what has kept me in it for so long." His words imply a loyalty

to the railways which appears to be in-born in the American people, and is, on the part of the railroads, more to be cultivated than left barren. A group of traffic men, representing varied industries, have contributed their thoughts generously in mixed praise and criticism, which are here set forth.

The Grain Trade . . .

L. B. FITZGERALD

*General Traffic Manager
Colorado Milling & Elevator Co.
Denver, Colo.*

From my observation as a traffic man, the principal topic among the transportation fraternity, both railway and industrial, is the car supply to move the available traffic being offered, as well as that now in the process of preparation for transportation.

The flour milling and grain industries require box cars in good repair and in large numbers to move the food-stuffs and grains so badly needed at

home and abroad. Because of the long hauls from interior country and terminal elevators and from flour mills to the large domestic consuming markets and to the seaboard for export, cars used in transporting these essential commodities are tied up under load for longer periods than any other commodities, which apparently cannot be avoided if we are to do the job set out for the milling industry. However, I believe there are other ways by which prevention of car delays can be accomplished if closer cooperation between railroad and industry management and railroad and industry labor can be realized. There is no question but that the railroads have been and are trying to render service commensurate with their available facilities, except it is my opinion the switching service in some of the territory where we operate has not been up to par for months, and I do not think the failure to perform adequate service is due to lack of power.

The desired cooperation can be ac-



The car shortage continues to be the No. 1 complaint of shippers

complished if some of the antiquated practices of peacetime operation are discarded and wartime operation during peacetime re-established, at least until we get out of the woods and back to normalcy. The one rule in particular to which I refer is that covering what constitutes adequate switching, which, under normal conditions, by precedent at least, appears to be one switch per industry per day.

During peacetime the flour milling industry of the United States has milling facilities far greater than the needs for domestic flour consumption, and one-switch service per day might possibly be sufficient to meet the needs of mills operating one shift of 8 to 11 hr. per day. However, under full-time operations of 24 hr. per day, such as is required to feed the world, it can be readily seen that more switching service is necessary to move cars to and from the mills and elevators in order to handle the added volume of abnormal business compared with peacetime normal. Consequently, the rail carriers operating under the authority of convenience and necessity can and should provide the required service for the added operating time of the mills by speeding up the handling of railroad cars, thereby eliminating bottlenecks at mills, elevators, and warehouses, and making more cars available for more shippers.

There is another situation confronting the western carriers, farmers, grain firms, and the milling industry and public at large. It is the prospective new crop of wheat and other grains which, from all indications, will be one of the largest, if not the largest, in the history of these United States.

The railroads serving the areas of grain production should take immediate action to prepare to handle this avalanche of grain by forcing the return of all system box cars to the owner railroads serving the wheat and grain belts of the Southwest, Middlewest, Northwest and Pacific Northwest, well in advance of the time of the harvest in each of the respective wheat and grain-producing areas.

If necessary to accomplish this, the railroads concerned should take individual action through the Association of American Railroads, or if that is unworkable, through the Interstate Commerce Commission, for issuance of similar per diem penalty charges against the carriers holding the cars as are now assessed against the shippers in the nature of demurrage for cars held in excess of 48 hr. free time. Surely there should be some method by which the lawful owners of railroad equipment can retrieve and get the use of their property rather than accept the low rental per diem charge of \$1.15 per day.

Flour Mills . . .

EARL B. SMITH

*Director of Traffic
General Mills, Inc.,
Minneapolis, Minn.*

Railroad management, the regulatory and legislative bodies, and the shipping public, recognizing that this country must have sufficient and adequate rail transportation service, are alarmed by the realization that this service has deteriorated to the danger point. The inadequacy of service is freely admitted by leading representatives of these groups, and while there is some disagreement as to the relative importance of the causes, there seems to be general awareness as to the major contributing factors.

With due respect to railroad management and its effort to maintain efficient and flexible operations, it seems that, following the war, marked increases in operating expenses occasioned by wage adjustments and increases in costs of materials and supplies, unfavorable estimates of traffic volume, and uncertainties as to the outcome of railroad applications for rate increases, led prematurely to retrenchment. Contrary to prediction, traffic volume has continued high, and this retrenchment has contributed to a general "slow-down" of rail transport rather than the postwar improvement the shipping public had been led to expect.

General and excessive delays and congestion became prevalent, followed soon by the present acute and chaotic freight car shortage. Not only were delays and congestion prevalent, but the railroad records of performance were insufficient to cope with the demands for information regarding the location or probable delivery time of cars or shipments entrusted to their care. By and large, the tracing service previously performed resolved itself into a mere record-gathering task, usually lagging days behind the actual car movement—all this within an industry which depends for its solvency and continued operation as a private enterprise, almost entirely upon the sale of its transportation service. Can it survive, much less prosper, if this service fails to meet the simple test of adequacy?

On the other side of the ledger, the American shipping public has emphatically demonstrated its capacity for patience and cooperation during and since the war and, while the efforts in connection with car conservation measures have experienced some letdown, shipper performance is still on a very high level. Cars continue to be loaded to maximum capacity in accordance with wartime restrictive orders, the wartime charges or penalties for car detention are still in effect, circuitous routing is largely avoided and, while many firms have

voluntarily adopted the five-day week, many others would operate on the sixth and seventh days, if they were able to secure sufficient cars in which to ship the goods produced on these additional days.

With production capacity curtailed or at a complete standstill for want of adequate transportation, resolute demands are being made for a return of dependable railroad transportation, which can only be accomplished by substantial improvements in the railroad plant, operations and equipment. In this improvement program no one feature is more important than an adequate supply of suitable cars for the transportation of those commodities which must move, and move freely, from areas of production to areas of consumption. The car shortage is universal—it is not confined to any particular type of car or to any particular section of the country. Consequently, it cannot be solved by shunting the present inadequate supply from one section of the country to another or by substituting one type of car for another. Efficient, cooperative and careful utilization and fair distribution of the available supply on the part of railroads and the public will alleviate the situation to a certain extent, but the only real solution requires substantial increases in the present supply of freight cars and a return of the dependability of service which was once synonymous with rail transportation.

Grain Products . . .

T. C. BURWELL

*Vice-President
A. E. Staley Manufacturing Company
Decatur, Ill.*

There is nothing about our railroad problem that a good application of common horse sense won't cure.

A railroad is a corporation, organized and existing for the purpose of transporting persons and property for hire and, as such, should be legally privileged to engage in the use of whatever mode of transportation best suits a particular segment of its operations. Its policies should be determined by individual management in consideration of "public interest" in the territory which it serves, rather than the mere adoption of policies approved by the directors of a national association. The railroad then becomes an integral part of such territory, a good neighbor, and is more rightfully entitled to favorable consideration where it would do the most good. By this I mean that management functions should be returned to the individual railroads—not handled by a national association dealing solely with national problems.

A railroad patron is interested in an adequate transportation system, proper-

THE SHIPPERS'



T. C. Burwell



Earl B. Smith



N. W. Putnam

ly financed, and permitted to earn a fair return on its invested capital after assumption of its just portion of the tax burden; likewise, other transportation agencies should assume their just portion of the tax burden, and none should be subsidized. There should be a transportation system that is able to furnish sufficient suitable equipment and to maintain reliable schedules involving safe transportation at a reasonable price, and in a position to furnish adequate current records.

Presently the railroads are faced with an acute equipment situation, which has resulted in a substantial loss of tonnage and materially increased their claim account. Several years will be required to alleviate this difficulty.

The equipment situation, as related to freight cars, is due largely to the lack of justifiable incentive on the part of railroad management to make capital expenditures for new equipment, by reason of increased cost without a compensating increase in per diem charges, together with the partial suspension of car service rules.

Transportation service should be priced in relation to economic and competitive conditions, consideration being given to the earning of a fair return on invested capital. To maintain economic stabilization, ultimately our country will be engaged in interchange of commodities among the various nations of the world, which probably will call for an intelligent overhauling of the export rate structure, if American producers are to meet world competition. Likewise, some domestic rates will necessarily require adjustment to enable domestic producers to meet import competition.

During World War II cooperation between the railroads and their patrons



Alvin W. Vogtle



K. C. Batchelder

reached an all-time high. I make this observation as an individual patron, from previous association with the War Production Board and as a member of several Office of Defense Transportation committees.

It is essential for the well-being of both the railroads and their customers that this cooperation continue.

To serve adequately the requirements of their patrons, railroads, along with industry generally, should strive to improve their efficiency with the view of resultant lower operating costs and to assist in meeting the increased cost of materials.

The very poor handling of traffic presently existing is due not only to inefficiency in the rank and file of em-

ployees, but to improper selection and inadequate training of the intermediate supervisory forces, and, in some instances, to the reduction of, or insufficient, supervision, which is pure false economy and results in increased net costs.

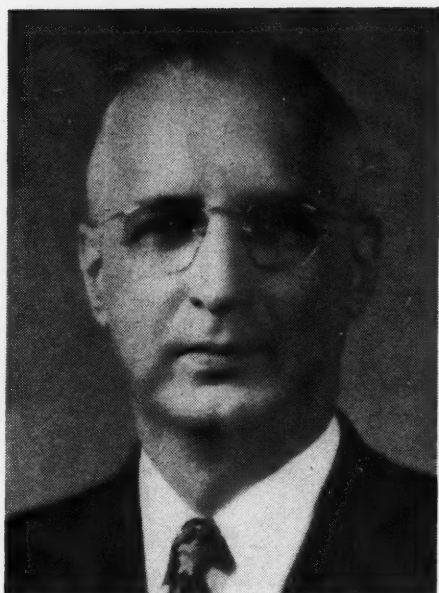
Another contributing cause is the failure of the railroads to modernize their terminal yard facilities to handle increased tonnage.

The most outstanding obstacle to successful, efficient operation of the railroad industry is the adverse, antiquated working rules, which should be adjusted to meet present-day conditions, thereby enabling excessive operating costs to be reduced and service improved. To accomplish such revision will require

SPOKESMEN



G. H. Shafer



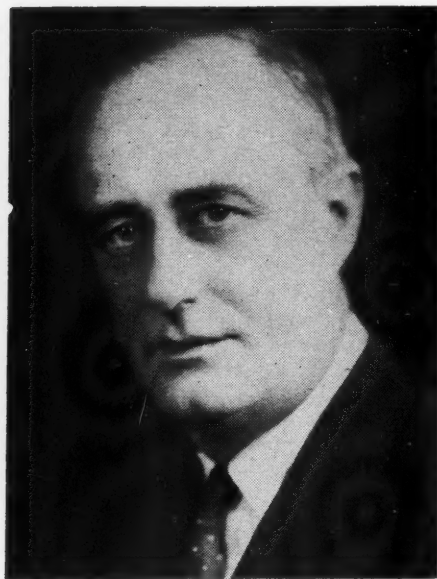
Charles W. Braden



A. G. T. Moore



Gen. William J. Williamson



Joseph P. Gudger

improved employee relations, involving perhaps an effort to enroll every employee as a stockholder on some satisfactory basis of stock acquisition by payroll deductions, thereby creating "employee interest" in the correction of basic defects. This is no mean task, with many employees scattered over many miles of railroad property.

Enlightened public opinion is essential to the ultimate solution of our transport problem. The public relations activities of individual carriers in the communities which they serve leave much to be desired. National publicity emanating from a centralized agency is generally considered propaganda and is much less effective than local releases and personal contacts.

Southern Lumbermen . . .

A. G. T. MOORE

*Traffic Manager
Southern Pine Association
New Orleans, La.*

Shippers believe that for many years railroad executives have coddled employees in the lower brackets through featherbedding and half-hearted opposition to labor union pay and rules demands. As paymasters of all railroad costs, shippers demand firmer labor policies by railroad executive management.

Shippers further believe executive management unduly deferred placing orders with car and locomotive builders in fear of new labor demands, which

now contributes to present unsatisfactory service on account of shortages of rolling stock. Praising carriers for according the best possible service considering their depleted rolling stock, deferred maintenance, labor difficulties and what not, simply "gilds the lily."

To accord satisfactory services, carriers must first meet shippers' requirements for transportation instrumentalities, then let labor and investors participate on a fair basis in greater net revenues to be derived from more tonnage and more efficient service and through less featherbedding and more "no's" to outrageous labor union demands. The implications of this simple formula reach into the very vitals of our national business, political and social economy.

Labor unions should recognize that their bread is buttered on the private ownership and operation side. In a free economy, the interests of labor and private enterprise are mutual. Labor cannot profit unless free business enterprise profits. If free business enterprise does not survive, then labor becomes totally subservient to the will of the dictator. Those labor leaders who promote dissension between business and labor are sounding the bell of enforced servitude upon free men.

The people reacted firmly against "the public be damned" policy of the old railroad "private car barons." Now railroad ownership is mostly in banks, insurance companies and investment trusts in which labor has direct interests, while traffic and operating executives ride in "business"—not "private" cars.

The people reacted even more quickly to recent labor leader arrogance, and hereafter will react even more firmly against "Simon Legree whip-cracking" and "public be damned" policies of



Peacetime has not brought the anticipated relief to the ports

power-drunk, irresponsible labor leadership. Government, as the servant and protector of the people's rights and properties, will subdue subversive labor leaders, but the rank and file of labor must clean house, lest government, the servant and protector of our "rights," becomes the master of our "liberties and properties" with our "rights" thrown into the discard. The forcing by labor leaders of federal ownership and operation of railroads is the first step toward that end, and railroad labor will be the first to feel the consequences and hardships of dictatorship. May they ponder this earnestly and curb the power of their irresponsible leaders to prevent them from precipitating either economic and social chaos, or federal dictatorship.

The vicious cycle of increased rail labor costs, followed by increased freight rates—and further increased rail labor costs, followed by further increased freight rates—must be attacked at some stage. Many shippers, who have gone along with the railroads heretofore in horizontal rate cases, will not similarly support them in the future for the foregoing reasons. The rail carriers had best proceed very cautiously before further making attacks on the shippers' purse through the I.C.C. Higher rates may yield less revenue, as there are competing forms of transportation.

The shippers will not sit idly by and permit proportionate increases in transportation costs by air, highway and water transportation agencies. Such an eventuality, if permitted, would stimulate inflation, which, too, must be attacked at some vulnerable point. Public service agencies have the greatest effect on our national economy. They must bear the brunt of our fight against inflation in so far as private enterprise is concerned, while Congress and the sovereign states must balance budgets

and curb public expenditures for their part.

To conclude: let the carriers and all of us be selfishly realistic. Every minute of the normal eight-hour day, feather-bedded or portal-to-ported to promote idleness or ease, reduces production and transportation efficiency. This pernicious system increases the prices we must pay for the things we want and contributes to the spiral of inflation. There is no substitute for sustained creative effort as a means to serve our national, group and individual self-interest if we are truly realistic in our philosophy and actions.

Distillers . . .

CHARLES W. BRADEN

*General Traffic Manager
National Distillers Products Corporation
New York*

It is reported that in the first 13 weeks of 1947 freight car loadings exceeded those of any like season since 1930, and that this was done with the number of freight cars on all railroads between 18 and 20 per cent less than in 1930. While this performance is commendable, it is no criterion that the needs of the shippers of the country were met. Indeed, shippers throughout the country were experiencing extremely serious shortages of freight cars. To put it frankly, shippers, in general, consider they have cooperated in car utilization to a great extent and now wish to see an improvement in the time in transit performance.

That the railroads do, and will, need new box cars in great numbers is now definitely recognized. From the shipper's point of view, as I see it, he will have his choice of new box cars or new trucks. If the railroads do not provide

the box cars, the truck lines will provide the trucks. However, with an appreciation of conditions, most shippers are looking to the future for an improvement.

As to the future, railroad men (and this is stated in all friendliness) have to get over the idea that the recent wartime non-competitive era will last much longer. The buyer of transportation service is no different than the buyer of goods. He will require, in his purchase of transportation, service, quality, completeness and convenience, competitively priced to meet his particular needs—the same as any buyer of goods.

Competition will be keen and, naturally, if other forms of transport are to continue to receive subsidized support, competition will be very keen. While it will require able management to find a way of competing under such conditions, it can be found. To cope with it may require a complete overhaul towards a long-range improvement of service, plant, rate structure and functional organization. It doubtless will require less ponderous and bureaucratic organization, if the railroads are to sell superior service.

Forest Products . . .

G. H. SHAFER

*General Traffic Manager
Weyerhaeuser Sales Company
Weyerhaeuser Forest Products
St. Paul, Minn.*

Although many in responsible positions in government and industry have recently paid high tribute to the valuable contribution made by the railroads during the war and postwar years, I doubt if the public, as yet, fully realizes the importance of transportation to the national economy. Throughout the entire war period, this great industry was fed on a starvation diet so far as new equipment, material, supplies, labor, and other items were concerned. This situation was permitted to develop in spite of repeated warnings of disaster on the part of railroad, shipper, and government representatives directly responsible for transportation efficiency. Only recently, as the result of a senatorial investigation, have we seen any real signs that new equipment will be forthcoming to replace abnormal retirements because of hard and long usage.

Regardless of a policy towards the railroads of "too little and too late" on the part of certain government agencies, which has brought us to the very brink of transportation chaos, we continue to subsidize competing carriers; we use steel to build cars and locomotives for foreign countries; we find transportation for three and one-half million tons of coal per month for export; and we find spare equipment to transport thousands of tons of fertilizer to the ports

for foreign countries, to say nothing of the millions of bushels of grain and other foodstuffs. Thus, those who are liberal with our resources are also liberal with our transportation facilities. It seems to make no difference that domestic shippers cannot move their products because of car shortages; equipment is made available to take care of government "commitments" simply by declaring that an "emergency" exists and by entering a priority order requiring the railroads to furnish sufficient cars from an inadequate supply to take care of such "commitments."

Honorable Clarence F. Lea, former chairman of the House interstate and foreign commerce committee, in submitting a report of the special subcommittee on transportation, on December 27, 1946, made the following comment: "The welfare of our transportation system should be a matter of first concern to the nation. Our government is firmly committed to a policy of service transportation based on privately-owned and publicly regulated transportation. Under this policy, we have a transportation system capable of great public service and practical utility."

We need more men like Congressman Lea, who believe that privately-owned transportation should be a matter of first concern to the nation. Not until we have a more general acceptance of this viewpoint can we expect strong transportation systems providing adequate and efficient service to the public.

In spite of recent difficulties encountered by the railroads and rumors of generally impaired railroad service, I am unable to conclude from available records that the overall service has deteriorated substantially. Trouble has been encountered from time to time because of severe weather and other conditions largely beyond the carriers' control. In some instances, terminal operations have been unusually sluggish due, in part, to the large volume of merchandise traffic and the reluctance of railroad operating employees to work during inclement weather. This situation, however, is not peculiar to the transportation industry; other industries seem to be having the same difficulty.

It appears necessary for the carriers immediately to exert every effort to improve their service in order to secure the maximum amount of transportation from existing equipment. May I suggest a campaign by the individual railroads to exceed all previous records in terms of car-miles per day? An improvement in terminal service would be an excellent place to start such a campaign. Moreover, may I suggest that some of our carrier friends be a little more energetic in ordering new freight cars and repairing old ones, to

the exclusion of passenger equipment? I find considerable thought among the shippers that some carriers have placed too much emphasis upon new passenger equipment during the postwar period.

Pending an improvement in car supply, the buyers of transportation should use equipment in the most efficient manner. Cars must be loaded promptly when set at the loading platforms; they must be loaded to their maximum capacity; and they must be unloaded quickly at destination. There is no evidence that the fine cooperative program of car efficiency initiated and carried on during the past six years by the Advisory Boards will be relaxed in any way. In spite of the many obstacles encountered, the shippers will continue their efforts. By working with the railroads, we can do much to improve service and minimize the equipment shortages which are now apparent.

The Pacific Coast . . .

K. C. BATCHELDER

*Traffic Manager
West Coast Lumbermen's Association
Portland, Ore.*

American railroads are confronted with a shift in transportation second in importance only to the original extension of facilities across the country. Involved are two primary economic factors. First, there is under way a large-scale migration of population and industry to the Pacific coast. Second, increasing costs of competitors are forcing to the rails a considerable volume of traffic which formerly moved by competitive means.

These fundamental changes in the transportation picture lead to an in-

escapable conclusion. A far greater pool of equipment than now exists will be required to meet successfully the transportation needs of the nation.

The movement of population to the West has been nothing short of spectacular. The population increase for the nation as a whole since 1940 has been 7.3 per cent—which means that 127,000 additional freight cars are required. During this same period, however, the population of Washington, Oregon and California has increased 36 per cent, from 9,678,000 to 13,189,000. Thus it is obvious that the needs of the Pacific coast are far greater than the national average. This Pacific Coast migration is continuing at the same pace. It means that, to effect a satisfactory exchange of goods, railroad thinking must be geared more and more to transcontinental requirements.

An added burden is placed on the railroads as business drifts to them from competing forms of transportation. This is accounted for by rising costs. An example is found in the shipment of lumber from Portland, Ore., to San Francisco, Cal. Prior to the war, the water rate per thousand board feet of, say, 2-by-4's was \$6, while the rail rate was \$8.10. Today the water rate per thousand is \$13, and the rail rate \$9.72. Water transportation has priced itself out of the picture.

The coastwise fleet on the Pacific coast has nearly vanished. Fifty-six ships were operating prior to the war; there are some 13 operating now. The prospects are that by July 1, when the War Shipping Administration discontinues activity in this trade, the number of bottoms in operation may be counted on the fingers of one hand.

More than a billion feet of lumber



Shippers are looking for extensive improvements in railroad freight houses and freight-handling facilities

that formerly moved annually from Oregon and Washington to California by water will now move largely by rail, consuming a million car-days. To meet this new demand, more than 3,000 additional freight cars are needed.

With this change is coupled an increase in the production of forest products, backbone of the Pacific Northwest's economy. In the area of one railroad alone, such production has increased more than 50 per cent since 1939.

In the intercoastal trade the figures are not quite so alarming. Before the war more than a billion feet of lumber moved annually by water to the Atlantic coast. The diversion of perhaps 50 per cent of this traffic to the railroads may be expected. What applies to lumber is true likewise of other commodities which move in the intercoastal trade.

As a result of this tremendous increase in population and industrial production, as well as the reduction in competition, a severe lack of freight equipment was felt on the West coast last year. For sustained periods the supply was below 50 per cent of requirements, whereas other sections of the country generally were receiving 85 per cent of their requirements.

The financial arrangements necessary to meet this situation are a problem of no mean proportions. It is a problem inextricably linked with the forward surge of industry. Nothing can stop that surge. Keeping pace with it—indeed, assuming that leadership for which railroads have been noted in the past—presents one of the most constructive challenges in the history of American railroading.

Southern Industries . . .

ALVIN W. VOGTLE

*Vice-President, Traffic and Sales
DeBardeleben Coal Corporation
Birmingham, Ala.*

If these be times that try men's souls in the world of transportation—and the daily front page seems to indicate just that—then there are two avenues of activity we must approach immediately:

(1) Shippers must get along with what they are offered, and like it—in other words, let the railroads "re-sole."

(2) Railroads, because of recent developments in equipment purchases, must continue to maintain their confidence in the future.

I write, obviously, of transportation's Number One problem—the freight car shortage.

Every shipper, every consignee in this nation, is acutely aware today of that shortage; but he knows, too, that the railroads have not been able to secure all of the new equipment ordered—

have not been able to, with all their prestige and "place in the sun," any more than you and I as individuals can tap a dealer on the shoulder and drive out with a new automobile.

At a recent meeting of the Southeast Shippers Advisory Board, there were presented some excellent reports outlining the current advances in the railroad industry. Mechanization of maintenance of way and structures activities; modernization of freight houses and yards; innovations in shop energies—all of these "plus signs" were directed towards greater efficiency.

But what can shipper and railroad man together do to help? Offhand, I think of seven steps up the ladder to a satisfying goal:

(1) Let's begin by admitting that some of us, both industry and carrier service, have relaxed in peacetime—and then get back to the "one-two" punch that characterized the perfect teamwork of the war period.

(2) Railroads should accept willingly the constructive criticism of shippers and consignees—and make an honest effort to correct unsatisfactory situations. If conditions cannot be remedied immediately, then the reasoning—not excusing—must be clear and easily defined.

(3) Shippers should avoid "gripes" of general nature; specific cases will bring about a prompter, proper handling by railroads.

(4) Meanwhile, industry should load cars promptly—as heavily as possible—and unload all cars when placed. And railroads should pull empty releases from all industries at least once every 24 hr., placing inbound, and forwarding outbound, loads within that time area—regardless of overtime or other labor penalties.

(5) Shippers should avoid circuitous routing; railroads should avoid cross haul of empty cars.

(6) Shippers should be sure to place orders daily for equipment needed and specify prospective destination areas. Then let the railroads carry the ball by seeing that the available car supply is shared equally between all shippers at local, as well as competitive, points.

(7) Finally, don't let expense block the spirit of "Keep 'Em Rolling." Let's say the average freight car costs \$5,000 today. Whatever is required to keep them moving is money well invested in this crisis. If the budget must be slashed, let the reductions be made in directions other than the movement of cars.

In large measure, shippers and their first cousins—the railroads—are up against it in the fight to maintain high public favor. We established an amazing war transportation record, but the

public forgets quickly. We are on the one hand hurt by strikes, or, on the other, injured by costs of wages and materials spiraling upward—but the public scarcely extends a warm hand of sympathy. We went through the poorest earning year, in 1946, of the six preceding years—but the public thinks mostly of our so-called lush war years.

To win again the public's favor (that we must have to survive) is a superman's job. We won it in the war. We can get it back only if we team together to keep those cars rolling.

Petroleum Products . . .

JOSEPH P. GUDGER

*Traffic Manager
Gulf Oil Corporation
Gulf Refining Company
Houston, Tex.*

The shipper's dollar must buy more transportation and on a continuing competitive basis. This same dollar must be spent not only to obtain better transportation but must be spent to protect private enterprise, ownership and operation.

Shippers are concerned with efficient transportation and fair transportation costs. Shippers are not only concerned with good transportation, they are also concerned with good government. Therefore, shippers should demand good government and good transportation.

Private enterprise has made this country great and only private enterprise can keep it so. Hence, shippers should insist upon a minimum of governmental regulations, and at the same time demand from the carriers efficient operation at a fair cost.

The transportation picture faces further adjustments and enlargements. The vast number of trucks and automobiles which will be produced in the next few years will vitally affect all forms of transportation, including the rail carriers.

Shippers and users of transportation must naturally take into consideration the availability of certain types of transportation and the convenience and cost of service. In this picture the rail carriers occupy a peculiar position. They provide, and have provided, a basic transportation on which competitive rates at the present time are based. It is apparent that the rail carriers must be maintained not only as an integral and fundamental part of our economy but, as has just been proven, as a primary part of our national defense.

Railroad operators and owners are among the leaders in industry and, as such, constitute a vital part of our industrial life. They know that adjust-

ments are ahead and should take the lead in whatever action is necessary to adjust themselves to the transportation situation in sight, in order that the rail carriers can provide efficient service at a fair cost and, at the same time, protect the large investment in railroad properties, which constitute a vital factor in our national economy.

Shippers, therefore, while requiring the rail carriers to furnish efficient and competitive service, should lend an enlightened and sympathetic attitude towards the carriers' honest efforts to provide a proper service and a protection of investment, requiring a diminishing overload of restrictive laws and regulations, exorbitant labor demands, and operating deficiencies.

The development of the rail carriers with the growth of this nation placed them in a strategic position, which until recent years gave them little concern with competitive transportation. The rapid development of other forms of transportation in recent years changed this situation.

The rail carriers, therefore, have been forced to depart from the position which gave them a strategic advantage and have been compelled to recognize the development of these competitive forms of transportation.

All future planning by the rail carriers must take into consideration the permanency of transportation by water, by highway, and by air, which are highly valuable and necessary for the shippers' use.

The Ports . . .

GEN. WILLIAM J. WILLIAMSON -
*Western Representative
Port of Boston Authority
Chicago*

The Middle West is the most productive and important region in the whole world. Surely this was demonstrated during the recent World War. The railroads operating in and out of this region did a magnificent job of moving tremendous production to support the rest of the nation's workers and production lines. However, during this period certain traffic controls kept this immense tonnage on the move both within the country and through the seaports without congestion. Ships were allocated to different ports to lift the load and keep up an unrestricted flow of men and goods, but, with the war's end, we find congestion, confusion and delay in many inland city railroad freight stations and in certain port terminals.

Most of these freight stations were designed and built during the horse-and-wagon days and are entirely outmoded in handling today's fast-moving merchandise freight. The great major-

ity of these freight platforms are so narrow that mechanical handling equipment simply cannot be used; most freight is handled by the old manpower method, which has always contributed to severe loss and damage to shipments (\$95,000,000 during 1946). If this rate continues (nearly a billion dollars in the next 10 years) the railroads should make every effort toward effecting consolidations and mechanization of freight stations to insure the more prompt handling of traffic and enable the manufacturers and shippers in this vast middle region to hold the position they have toiled so valiantly to achieve.

We have had entirely too many embargoes on merchandise freight of late. Thousands of these small shipments are the seeds from the laboratories and workshops of science and industry that develop and grow into the carload shipments of large industries. Some of our ports have become congested, causing embargoes to be issued, with resultant heavy loss to shippers. Much of this congestion could be avoided by a more intelligent choice of ports and routing thereto. In some of these instances, the shippers themselves are to blame; in others, foreign freight forwarders who choose the routes and ports for their customers are not doing an intelligent job; and, in others, railroad solicitation itself is not rendering to the shipping public the best and most efficient service to which the shipper is entitled.

The nation needs the full capacity and facilities of all our ports in event of national emergencies. The ports will be just as efficient as the revenue derived from the movement of persons and goods through them will permit. Some ports have natural encumbrances which will always be difficult to overcome, while others have developed only a small portion of their natural advantages.

Chain Stores . . .

N. W. PUTNAM
*Traffic Manager
Gamble Skogmo, Inc.
President, Chain Store Traffic League
Chicago*

What's wrong with the railroads? Perhaps a fair answer to that question would be: Nothing that efficient labor and sufficient equipment cannot cure.

Whether or not the railroads foresaw the equipment deterioration in time to do something about it is hard to say. Proper allocation of steel to car builders should have materialized at the end of the war, instead of waiting until the drowning man went under two times before he was pulled out of the lake. It is true that railroad managements were reluctant to place orders for new equipment before they knew what kind

of a rate increase they were going to get. Now that they have that increase, they are dubious about investing in new equipment for fear that the "boom load" now facing them will not last and they will have idle equipment on their hands.

I can't conceive of a situation as acute as this one is today, creating that kind of thinking. With the present box-car supply 500,000 short over 1930, and its present goal of recovery placed at 120,000 per year, the railroads will be four years or more in making up the deficit to put us on a par with the business that moved during the last depression. The simple fact is the railroads have met a stalemate in their business, which has created some mighty big "ifs."

We, in the Chain Store Traffic League, have just finished a four month's campaign with practically every railroad in the country to get them conscious of their ability to handle merchandise in less-carload quantities as a money-making proposition. We will fill a lot of those box cars that are going to be built, and the Lord knows that we could fill them right now if we had them. What the railroads have to realize is that this is an era of speed, and service must be their commodity to sell.

If they make a concentrated effort to do a job now, with what they have to do that job, a lot of these other evils will clear up and improvements will follow naturally.

We, as shippers, are not any more guilty of wasteful use of box cars than the railroads themselves. The day-to-day carry-over of loaded box cars at freighthouses waiting to be handled is the crux of the entire problem, and every time you bring it up, it resolves itself back to labor.

Much has been said about railroad labor. Railroad management will tell you that you can't get an honest day's work out of a man any more. I wonder why? Is this just an excuse, or could it be that railroad supervision is not of the right caliber to get the job done? Rates of pay are higher today than they have ever been, jobs are plentiful, but have railroad managements, of late, tried to instill an "esprit de corps" in their workmen? Do they give them "pep talks," pat them on the shoulder for a job well done, and place promotions where they will do the most good? Perhaps railroad management is just as much at fault as railroad labor.

It seems to me we need a goal in this country, i.e., something to boost morale. We went at top speed to win the war, and everybody cooperated. Why are we slowing down to "Win the Peace?"

Twelve Months of Tough Railroading

Roads achieve record-breaking carloadings with dwindling car roster; service efforts mitigate serious car shortage and peacetime relaxation of standards

THE most wonderful performance in the history of American railroading was the unqualified characterization of the feat of the carriers represented in the record loading of 931,766 freight cars during the week ended October 19, 1946, by blunt, plain-spoken, J. Monroe Johnson, director of the Office of Defense Transportation. Several months later, at a shippers' meeting in the "wet corn" country of Iowa, a representative of agricultural interests rose on his "down-to-earth" feet and declared that "if the railroads don't give us some cars, we're going to leave off being Democrats and turn Communist!"

The two most outstanding facts about the year just passed were highlighted by these two dramatic comments. The 12 months which have elapsed since the publication of the last "Freight Progress Annual" have brought a much higher level of traffic than was generally foreseen. As a result of that heavy tonnage, and the failure of receipts of new equipment to match even the retirements of freight cars, shippers have experienced a very serious car shortage.

It is exceptionally difficult to measure statistically the extent of that shortage, but Colonel Johnson, in a statement last

fall intended to depict the gravity—not the bright side—of the car situation, stated that the roads were then meeting about 85 per cent of the public demand for freight transportation. If this be taken as a conservative estimate, it is clear that, measured by the extent to which other businesses have, and are, supplying the demands of their customers, the railroads are doing "right well."

But it is equally clear that the public does not class its railroad transportation with other businesses, for the alleged "worst car shortage in history" has drawn upon the carriers, Congress and the regulatory bodies perhaps the most vociferous clamor for amelioration that has stirred the country since "Repeal." Not only has the plain fact that there are not enough cars to go around been sicklied o'er with divers quack diagnoses and remedies, but the shortage has divided section against section and railroad against railroad. The West cries for Class "A" cars "hoarded by eastern mills" so that its grain may not rot on the ground; New England sees mortal injury in the westbound car quotas. The western roads point to the fact that they have fewer box cars on line than they own; the eastern lines say the

former have all their open-tops. The Association of American Railroads, which seeks to serve the national interest as a whole, is accused of favoritism by the West for its partial suspension of the Car Service rules and by the East because it orders cars moved empty to the West.

In the thick of this storm of controversy is the individual shipper, whose day-to-day problem of satisfying his customers and clearing his plant floor is critically affected by the inability of the carriers to meet all his orders for cars. To him the question is not one of balancing conflicting interests but of getting cars.

Whatever improvement in basic freight service has been possible during these past 12 months of turmoil is due to the combined influence of a large variety of improvements in plant and operating techniques which the railroads introduced in the face of material and manpower shortages and "short" net incomes—improvements which it is the aim of this "Freight Progress Annual" to emphasize.

The Load . . .

The week ended October 19—"the most wonderful performance" week—saw carloadings which exceeded by 16,000 the loadings handled during any week of the war and were the highest since the week ended October 30, 1930. Earlier in 1946 Colonel Johnson had predicted that the railroads couldn't handle more than 925,000 cars a week. But more of the "impossible" was to come. The very next week after the performance which made Colonel Johnson "eat his words" saw total loadings of 942,257 cars.

Box-Car Loadings Up in 1947

During the first 14 weeks of 1947 a total of 5,157,318 box cars were loaded, an increase of 1.6 per cent over the corresponding period of 1946. The efficiency per unit involved in this increase can be measured by the fact that the rise in total box-car loadings in 1947 was accomplished with an average of 6,392 fewer serviceable box cars per month than in the corresponding period of 1946. Revenue ton-miles hauled in

General Public Polled on Railroad Freight Service

In the Sixth Annual Survey of Public Opinion conducted for the Association of American Railroads, released by the Opinion Research Corporation, Princeton, N. J., August 5, 1946, 40 per cent of the general public expressed the opinion that the railroads were handling all their freight satisfactorily, while an equal number felt there were serious delays. The other 20 per cent "didn't know." When asked why the railroads weren't able to handle all of their freight without delay, the 40 per cent with that opinion ascribed the following reasons, which are compared here with a similar survey conducted in 1945.

	1946	1945
Manpower shortage	27 per cent	46 per cent
Lack of equipment	26	26
Strikes, union trouble	18	**
Too much business	15	26
Poor management	5	**
Disinterested, careless employees, no sense of responsibility	5	**
Railroads were run down; had no foresight	4	4
Can't get new equipment	4	2
Too much interference; government regulation	3	**
Looking out for themselves, won't move a car unless it's full	2	1
Have to give priority to war material	0	12
Other reasons	6	11
No reason given	14	3

Percentages add to more than 100 because of multiple answers.
**These comments included with "other reasons" in 1945.

each of the first three months of 1947 (preliminary data for February and March) have exceeded by substantial amounts the traffic hauled in the corresponding months of 1946. Ton-miles in the first quarter of 1947 were 7 per cent greater than the corresponding figure for 1946. Estimated total ton-miles in March, 1947, were 55 billion, only 4 per cent under the October peak of 1946.

The year 1946 was itself a record peacetime year in revenue ton-miles. The 592 billion ton-miles hauled by the railroads in 1946 were only 20 per cent below the traffic volume of 1944, the peak year of all time.

A Profitless Prosperity

Although the railroads did a record peacetime business during 1946—and are continuing to do so in 1947—their financial reward for the job has not been in keeping therewith. While the industry did not face the necessity for reconversion of plant from war to commercial production, it did face a large number of discouragements to management incentive—not least of which was an alarming decrease in net.

Net income in 1946 of \$288.5 million was the smallest since 1940, despite the fact that the carriers included in their 1946 accounts federal income tax credits amounting to \$170.5 million, or the equivalent of nearly 60 per cent of the reported net. According to a special analysis by the Interstate Commerce Commission, 35 roads recorded net deficits aggregating \$65.2 million for the year. This poor showing in net income was in spite of the fact that the roads reduced their fixed charges almost 26 per cent during the war years.

To meet drastically-rising expenses, the roads received rate increases which were freely characterized as "too little and too late." Increases averaging approximately 6.5 per cent were authorized on an emergency basis effective July 1, 1946. A minority of the commission admitted the increase was not sufficient even pending further proceedings in Ex Parte 162. After lengthy deliberation which entirely ignored the railroads' crying need for relief, the commission granted an additional 11 per cent rate increase, effective January 1, 1947, which brought freight rates about 17½ per cent above the prewar level. These revisions in rates are expected to yield the railroads about \$980 million more in revenues than was forthcoming under prewar rates, based on an estimate for 1947 traffic of an increase of one billion in revenue ton-miles over 1946 and a decrease of 17 billion in passenger-miles. Of some influence in railroad earnings for 1947 will be the repeal of land grant deductions covering the movement of military freight and



A "glamor girl" of the freight-car fleet is this experimental "reefer"

passengers, effective October 1, 1946.

The increased freight rates will bring no unwonted prosperity to the railroads, however. The wage boost of 18.5 cents an hour finally arrived at in 1946, following a strike by two of the railroad brotherhoods, was estimated to cost the Class I roads about \$725 million in 1946, according to the I. C. C.'s Bureau of Transport Economics and Statistics. It is true also that, due to heavy traffic and generally congested conditions, overtime payments to railroad employees will probably continue at a high level for some months to come. Such payments in 1946 were estimated by the I. C. C. to have been more than \$316 million, or substantially in excess of overtime pay for any year prior to 1943.

The Car Shortage . . .

While, as has been stated, the railroads probably are meeting more than 85 per cent of the demand for transportation, the shipping public has reacted with vociferous demands for relief. The reason is not difficult to find: The scarcity of transportation—especially of rail transportation—is "a most expensive thing for a nation," according to Colonel Johnson.

The effect of the car shortage upon individual companies is very real. When a medium-size manufacturer in New England received only six cars a day for loading—when he needed 10—his profit turned into a loss, and he closed down. Coal mine operators claimed millions of tons of soft coal have been "lost" through the car shortage (*vice versa*, many car-days have been lost due to cessation of mine output by strikes). A large paper concern, which normally

loads its products directly from the line into freight cars, may have to shut down because of lack of cars. Merchandise houses are threatening to use other forms of transportation. Some manufacturers are resorting to railway express—and even air express—to consign vitally-needed parts.

The greatest shortage has been in box cars—particularly those equipped with loader devices and those suitable for high-grade lading. Open-top cars ran a close second. At latest reports, demand for flat cars is very heavy, due chiefly to lumber loadings in the Pacific Northwest and an expansion in the movement of agricultural implements and machinery from midwestern plants. During the first 14 weeks in 1947, 14.5 per cent more flats were loaded than in the corresponding weeks of 1946. No actual shortages in stock cars occurred during the first 15 weeks of 1947. At a recent shippers board meeting, amid a general atmosphere of tragedy, railroad representatives were able to report one "pleasant" item: "we are able to furnish enough flat cars to take care of our orders."

Despite general opinion to the contrary, the car shortage of the past 12 months was *not* the most serious in history. E. W. Coughlin, assistant to the chairman, car service division, A. A. R., has set forth the facts in this matter:

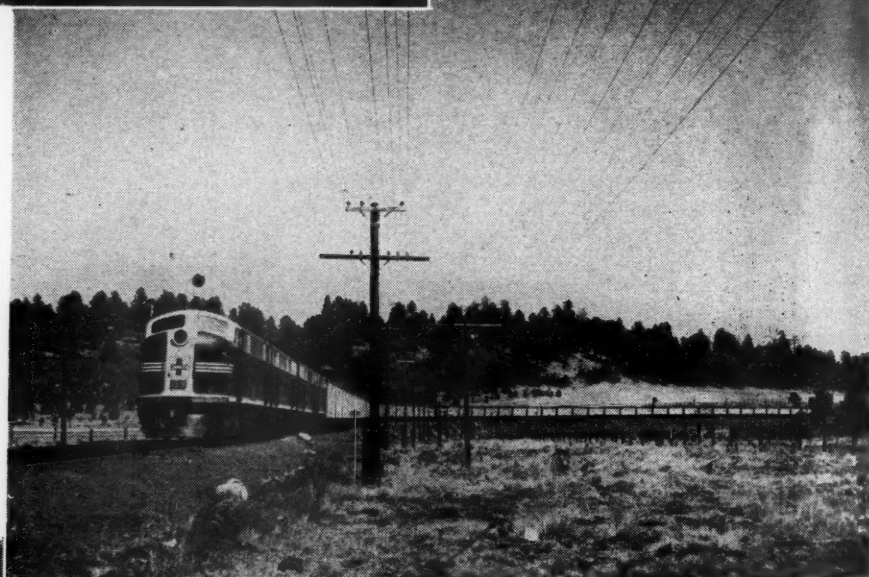
"The statement has been made in some quarters that the present car shortage is the most serious ever experienced. Apparently we have short memories. The highest level of 1946 loadings was in the week ended October 25. At that time daily box-car shortages of 21,714 were being reported by all U. S. roads,



Above—Freight volume is running at an all-time peacetime high

Right—Fast perishable blocks bring California's stored sunshine to populous cities

Below—L.c.l. is taking about 30 per cent of the box cars



of which 43.7 per cent was on eastern and southern roads, and 56.3 per cent on western roads. In the week ended October 31, 1922, admittedly the peak car shortage year of all time, and the year of greatest stress on rail transportation following World War I, average daily box-car shortages were 91,039, of which 34.4 per cent was on eastern and southern lines and 65.6 per cent on western lines. For the week of March 15, 1947, only 45 per cent of the reported box-car shortage is in the West; 55 per cent in the East and South."

There is no statistical evidence in hand to prove whether the car shortage is getting worse or better. But, to clutch at a few straws in the wind, it may be noted that a recent meeting of the Mid-West Shippers Advisory Board expressed optimism over the car supply in the near future. Another hopeful

sign—if isolated—is a reliably-reported conversation late in April between two car service men in St. Louis, wherein the one asked the other if he could take 50 box cars off his hands!

In 1906 and 1907 the railroads failed to meet demands for transportation to the extent that the entire country was aroused and the Interstate Commerce Commission was led to hold its famous investigation of the "transportation shortage."¹ In the general excitement which ensued, the consensus among railroad executives who made public statements on the problem was that the cause of the congestion was insufficient line capacity—and not lack of rolling stock. J. J. Hill, president of the Great Northern at the time, declared that the railroads would have to spend \$5.5 billions

¹ 12 ICC 564.

to enlarge their fixed plant if the business of the country was to be handled.

In marked contrast the existing "transportation shortage" is not at all attributable to insufficient roadway capacity, with the possible exception of yard trackage at certain locations. The sole resemblance to the shortage of 1906 is that the railroads, as was the Great Northern in 1906, are "endeavoring to bore a one-inch hole with a one-half-inch auger."

The outstanding fact of the present-day transportation shortage is that there are not enough freight cars in existence. This truth is dramatically demonstrated by the following comparisons:

In 1918, a total of 2,385,582 freight cars were available for the production of 405,379,284,206 ton-miles (revenue) on Class I roads.

In 1946, a total of 2,014,654 freight cars were available to produce 591,954,000,000 ton-miles.

There are two principal reasons why the railroads do not have sufficient cars to handle the traffic offered them:

(1) Starvation earnings and traffic in the Thirties, with thousands of cars standing idle, gave the railroads no incentive nor financial ability to purchase new cars.

(2) The country was unable during the war to divert material, manpower or plant capacity from necessary war work to the construction of new cars, and, since the war, production capacity of certain basic commodities has not been utilized to make it possible for the car builders and the railroads to produce new equipment to the capacity of their shops.

The blame for the latter condition, in the larger sense, does not rest upon any single party; it is the inevitable result of the country's engagement in war. E. A. Smith, senior general attorney of the Illinois Central, expressed it thus at a shippers' meeting recently:

"We cannot cease the construction of cars for a substantial period of time, use up our supplies of steel for shot and shell, and have, at the same time, an adequate supply of cars. We manufactured and sent abroad during the last five years 120,000 cars, many of which were used, of course, for purposes of transporting our troops and supplies in foreign lands. We cannot have our cake and eat it too. We are short of cars because we were engaged for almost four years in a great war, and not in the pursuits of peace."

Peacetime Worse Than War . . .

It may be asked why, with ton-miles and tons-originated running below the levels of the wartime years, the shortage of cars and, in some cases, over-the-road movement, are worse now than during the war. The basic answer to this question is that the economy of a

country at war is by no means the same as exists in peacetime. This difference extends not only to the quantity and character of the business transacted in the country, but as well to the attitude of its people.

The principal reasons why the railroads are unable to handle a lesser load now as well as they were able to handle a greater load during the war are:

Character of railroad traffic is different—Piece-goods, which are shipped in small lots, have replaced war goods. Piece-goods are less dense and are bulkier to handle than the typical war shipment.

Shorter hauls—Average miles-per-revenue-ton-per-road in January, 1947 (the latest figure available), were 232.4, compared with 235.0 miles in January, 1946. Average miles-per-revenue-ton-per-road during the whole of 1946 were 225.9 compared with 239.4 miles in 1945, 243.6 miles in 1944 and 239.8 miles in 1943.

Less concentration of traffic—A return to peacetime has brought a dispersal of traffic as compared with recurring heavy movements between major points of production, storage and export during the war. Commercial producers seek out a wide range of markets—especially during times of material shortages—with the result that there is great diversification of routing and increased branch-line traffic volume.

Weaker will to work—The people who pushed their energies to the limit to wage the war cannot be expected to do so now. In fact, the very opposite attitude has supplanted patriotic enthusiasm and efficiency.

This relaxation is demonstrated particularly by the manner in which the country embraced the five-day week as soon as hostilities ceased. And while that practice has not infiltrated the railroad industry itself, it is otherwise so widespread that its effects are difficult to combat. For example, it has been said that, due to the fact that the five-day week has become almost standard for motor-trucking concerns in certain large cities, even those shippers who would, because of the car shortage, agree to load and unload on Saturdays, do not do so because they cannot get truck service on that day.

An exceedingly important cause of the railroad transportation shortage in the 12 months just past has been the erratic offerings of traffic by main groups, due principally to strikes and to material shortages. As Colonel R. S. Henry, assistant to president, A. A. R., has pointed out, "Transportation cannot be stored. It works best when its offerings are steady and regular. Otherwise its capacity goes to waste."

In its annual report for 1946, the I. C. C. cited the two primary causes

of the transportation shortage as: (1) Interruptions of normal industrial and transportation operations by strikes, and (2) inability of the railroads to make adequate replacements and repairs of worn-out and defective equipment.

The most significant strike in the last 12 months with regard to railroad transportation was the work-stoppage by train-service employees of the railroads lasting from 4 p.m. May 23 to 4 p.m. May 25, 1946, as a result of a strike called by the Brotherhood of Railroad Trainmen and the Brotherhood of Locomotive Engineers. But the effect of this strike in producing car shortage was not nearly so severe as have been recurring strikes in the bituminous coal mines. During 1946 coal production and car loading dependent thereon were heavily curtailed by two general work suspensions, extending over a period of 13 weeks, or approximately one quarter of the year. As a result, the railroads were called upon to transport, within a period of nine months, a volume of coal, the mining of which should have been spread over a period of 12 months.

In addition, soft coal miners of the nation walked off the job on April 1, 1947, in a so-called gesture of mourning and, on April 7, embarked on a program of highly restricted operation due to alleged failures to meet safety requirements. During this 11-day work suspension, about 190 thousand carloads were lost. Furthermore, the future of coal production is not bright. John L. Lewis and the coal operators met on April 29 for the first time in seven months, but little hope exists that a quick contract will be negotiated. If no agreement is reached by June 30, when the government's power to operate the mines expires, a new coal strike may ensue.

In addition to the coal strikes there may be mentioned strikes of local truckmen in various cities—notably New York—which completely blocked the moving of less-carload freight and the handling of cars at team tracks.

Effect of Port Shipments

Heavy movements of commodities to ports for the relief of foreign countries have an important effect on the car supply. Export movement requires a longer-than-average haul, and, due to the irregularity of ship loadings and the general congestion of certain ports, a far longer turn-around is incurred. The port situation was further aggravated by heavy storms on the Atlantic and Gulf during the winter, by the acute fuel situation in England and by heavy grain exports. The A. A. R. found it necessary to embargo certain ports, permits being issued to insure arrival of cars in time for ship loading.



Left—Dispatchers' train sheets show intensive utilization of locomotive-miles and fixed plant during the past 12 months. Right—Transfer platforms are exceedingly busy these days

According to a report issued in February, 1947, the following principal factors make for the recent congestion at the port of New York:

(1) Whereas, in the war, between 60 and 70 per cent of all export traffic was open-car freight, which lent itself to handling by mechanical means, at present 60 to 70 per cent of export freight arrives in box or refrigerator cars and has to be handled manually, utilizing lighterage equipment inefficiently.

(2) During the war the greater portion of export traffic moved to ships loading traffic for a single port. In contrast, ships now call at as many as eight or nine ports, so that the cargo must be stored in port order, necessitating complicated call-forward of freight.

(3) Many shippers are now making up carload consignments for multiple or split deliveries at seaboard to vessels loading at various points at the port.

(4) Import shipments have increased materially.

(5) In February, 1946, there was a strike of the independent towing company employees; in May the trainmen and engineers struck; in September and October the truckmen struck; and in September and October two maritime strikes occurred. The formula on which the truckers' strike was settled so increased the cost of trucking in New York that it practically forced the railroads to turn to lighterage for ship delivery.

Cars in a Virtual Pool

The code of car service rules, with but few changes, has been in effect since 1920. In normal times these rules are the fundamental basis of good freight car utilization. Since the beginning of the war, however, conditions have not been adapted to complete enforcement of the rules. While there has been no suspension or change in the rules cover-

ing open-top cars, the quotas imposed on the carriers in the East for the return of box cars for western loadings—the so-called "BC" orders—and indiscriminate loadings at certain locations, dictated by necessity, have resulted in what amounts to a temporary pooling of box-car equipment.

Rules Suspension

While it is defended by the Car Service Division of the A. A. R., the partial suspension of car service rules has not been popular. The western railroads do not like it because, they contend, the eastern roads utilize western cars made empty on their lines for consignments to points other than located on the owning road, and the cars remain away from home for excessive lengths of time.

Certain of the eastern carriers, on the other hand, are none too happy about the "BC" quota orders which are imposed upon them. The chief complaint of many eastern shippers regarding the quota system is that the cars are consigned to the western roads empty, when, they assert, they could be sent loaded.

To this, the Car Service Division answers somewhat as follows: Since the start of the war, when box cars were first moved west under "BC" orders, the railroads, on numerous occasions, have attempted to load some of the cars moving under the quota in the direction of the home road. But in practically every case the experiment proved unsuccessful because control of the cars was lost. For example, cars loaded to Chicago or the St. Louis terminals were

released at industries which were heavy users of box cars for loading eastbound, with the result that the cars "bounced back East" on their release. One of the A. A. R. car service officers stated recently that he had set up a dozen or more movements of cars westbound under load and that at no time did he get more than 10 per cent of the cars into the area where they were needed.

The Car Service Division points out further that, because of heavy loadings in the West to the East and Southeast, there must be a constantly returning flow of box cars empty, in any event. The A. A. R. has not abandoned the possibility of loading the cars sent under quota, and is currently experimenting with a procedure under which cars would be loaded on specific permits to be issued jointly to the originating railroad and shipper, and would provide that the cars loaded against such permits must be in excess of the number used by the shipper during a previous, agreed period.

Rules Observed in 1922

The Car Service Division has pointed out that in 1922—when there occurred a car shortage worse than that now existing—the car service rules were virtually the sole reliance of the western roads for the return of their cars, because the machinery for distribution of cars and movement orders by the Car Service Division had not been perfected. As pointed out previously in this article, box-car shortages on the western lines were far more severe, proportionately, in 1922 than in the present-day shortage.

Efforts to Ease the Car Shortage . . .

The obvious remedy for the car shortage is the addition of new equipment to the railroads' roster. Back in August, 1946, *Railway Age* published an article entitled "The Equipment Situation—Not So Good!" This headline might well be repeated as being still more true 10 months later. The table herewith sets forth the facts of total railroad car ownership as of April 1, 1945, to 1947 inclusive. It shows that the total car ownership of the railroads has declined substantially in each successive year. In fact, for a number of years, the retirement of old freight cars has greatly exceeded the installation of new cars.

cars on order, compared with 75,358 on March 1 and 40,217 cars on April 1, 1946.

Class I roads installed 7,249 new freight cars in the first three months of 1947, of which 3,017, or 41 per cent, were installed in March. This compares with 8,006 cars installed in the first quarter of 1946, and indicates that, while railroad orders for cars substantially increased, the ability of the shops to fill them actually diminished.

Year	Freight Car Ownership As of April 1		Total
	Box	Open-Top	
1947	724,492	859,087	1,736,270
1946	737,255	862,724	1,755,254
1945	745,463	868,663	1,770,459

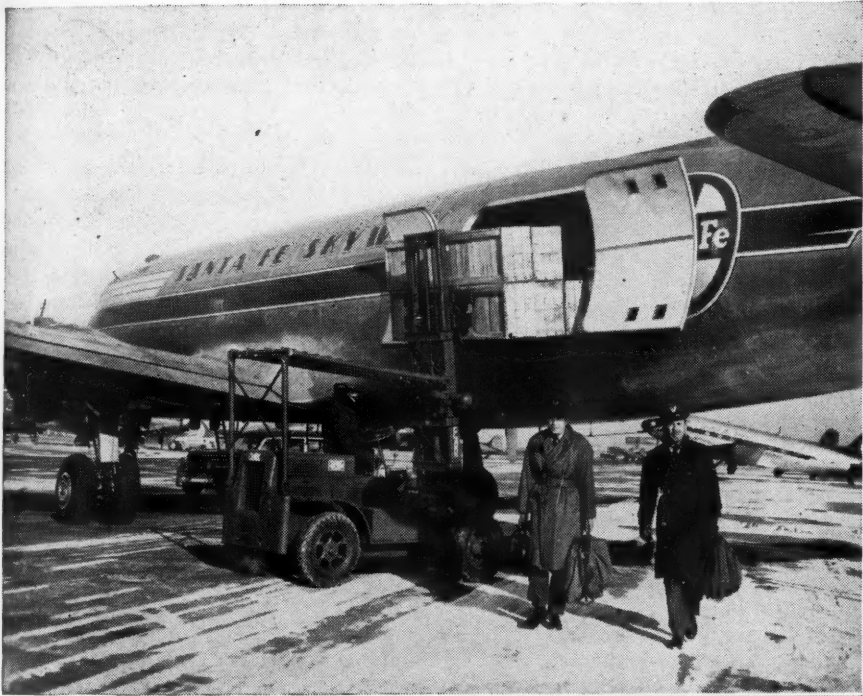
The average shipper has heard the sad facts with regard to new freight car production almost *ad nauseam*. He

has heard the National Industrial Traffic League deplore heavy exports of freight cars while our domestic carriers go hungry. On the other hand, he has heard the statement of the car manufacturers that, if it had not been for export orders, which permitted them to begin their reconversion process before orders in bulk began to come from American railroads, the situation would now be worse. The average shipper has also heard of Commissioner Johnson's plan for the purchase of 50,000 new box cars by the government for lease to railroads.

The shipper has heard many times that steel is one of the chief short items holding up the production of cars. This paper pointed out, not long ago, that the steel companies ought to re-examine the distribution of their output to make certain that their deliveries of steel to consumers in various categories are not out of proportion to the ability of those shippers to obtain cars to load their products. The very obvious conclusion was drawn that there is no point in funneling steel into certain segments of the economy if there are not sufficient freight cars to move it.

10,000-Car Program Set

It was with considerable elation that shippers heard in February that, as a result of joint action by the carriers, steel companies and the government, sufficient steel probably would be forthcoming to underwrite a freight car production program of approximately 10,000 cars monthly. A few weeks later the railroads announced a buying program of 131,600 cars, costing ap-



Above—Air freight subsidiaries were established by several roads recently, including the Santa Fe and Kansas City Southern. Right—The Baltimore & Ohio's "Sentinel Service" gives shippers prompt notification of the transit time

In 1946 the Class I roads installed 40,377 new freight cars, compared with installations of 38,987 in 1945 and 80,502 in 1941. But the increased installations were more than outweighed by an increase in retirements. The Class I roads retired 59,031 cars in 1946, compared with 41,905 in 1945. As of April 1, 1947, according to the A. A. R., Class I roads had 87,080 new freight



proximately \$650 million. This program is expected to absorb all the steel available for freight car construction until at least the middle of 1948.

Nevertheless, at the risk of dampening optimism, it must be pointed out that the increased tonnages of steel promised to provide an output of 10,000 freight cars a month will not be placed in full effect until July rollings. Furthermore, this level will only be continued through August, because builders' shipping schedules indicate a decline after October from the 10,000-car level, according to a report of the Office of Defense Transportation issued on April 3. As a result of these facts grave doubt exists that a sufficient number of freight cars will be built by the end of the year to make a real attack on the present car shortage.

Supervision Eases Shortage

Aside from the building of new cars, there exist a number of other avenues to deal with the car shortage. Were it not for the widespread improvements in rolling stock, plant and operating techniques which are described in separate articles elsewhere in this issue, the car shortage would, indeed, be far worse than it actually is. Furthermore, while it is true that shippers may encounter what may appear to be unreasonable delays in "pulling" cars made ready, and road and yard "stickiness," individual railroads have made vigorous and successful efforts toward the improvement of operating efficiency, to offset the very discouraging obstacles of deteriorated equipment, inadequate and unproductive labor, and insufficiency of good supervisory personnel.

Space permits mention of only a few outstanding steps in this direction. Many roads, wherever possible, are working switching crews and freight-house forces overtime to keep their services current but, just like other industries, they encounter difficulty in getting their labor forces to put in overtime. It is not uncommon to have engines held out of service because sufficient men do not report for duty to man the scheduled tricks. Having a surplus of stock cars available in recent months, the railroads have taken advantage of the situation to adapt the cars for other services, fitting some of them for handling grain, coal and wood. A number of roads, in order to reduce turn-around time, are giving "red ball" handling to all empty device cars. One large western carrier is running special eastbound trains of empty box cars from the Pacific coast to loading points on the eastern end of its line. To reduce road time of freight cars, it is understood that the president of one large system, in an open letter to employees, is offering \$50 apiece for the best ideas regarding the

reduction of delays in 12 individual freight yards.

A step of great importance in reducing bad-order freight cars was taken by the railroads in January, 1947, when interchange rules 1 and 2 were revised to permit repairs on foreign cars up to \$100, and thereby reduce empty mileage and loss of car-days. This modification makes it possible for roads to repair bad-order foreign cars which would, otherwise, have to be sent home empty.

On a number of railroads the former practice of having each station report its surplus empty cars has been discontinued to avoid delay in securing disposition from the distributor's office. Instead, cars made empty at outlying stations, for which no immediate loading is in sight, are forwarded at once to the nearest inspection point on an empty car waybill. Each inspection point is furnished a daily car order which provides an outlet for practically all empty cars.

How Shippers Fight Car Shortage . . .

That the car shortage would be much worse than it is were it not for the excellent participation of shippers in the transportation efficiency program is self-evident. Tributes to the work of organized bodies of shippers—especially the regional Advisory Boards—have been generous during the war and subsequent reconversion period.

"Vigilantes" Do the Job

Spearhead organizations of shippers doing battle with inefficiency are the car efficiency committees or "vigilance committees," working under the aegis of each of the 13 Regional Advisory Boards. A measure of their accomplishments is indicated by the decrease of turn-around time of freight cars from 16.7 days in December, 1945, to 15.2 days in December, 1946. It is estimated that a reduction of one day in turn-around time is equivalent to the saving of 100,000 cars. The vigilance committee of the Mid-West Advisory Board, in the belief that the use of circulars, press releases and other publicity has been exhausted, has proposed to base its work almost entirely upon personal contact with shippers. In the future this committee will experiment with a series of meetings in towns outside its headquarters in Chicago in an attempt to reach the top executives of the industries in these local areas.

At least one trade organization of the country is publishing information periodically on the transit time of package cars by various routes, and is urging its members to use those railroads which turn in the best performance. By so

doing, it is said, the shippers will not only expedite the handling of their own traffic but will also benefit the railroads in preventing terminal congestion and car wastage. At a recent shippers' meeting, traffic men went so far as to suggest that railroads experiencing congestion should not hesitate to recommend alternate routes. One shipper claimed that, in consigning 200 cars between the same points, one route averaged 13 days in transit, while another took only 7 days, the latter saving a total of 1,200 car-days.

L.C.L. Volume . . .

An outstanding phenomenon of the past 12 months has been an abnormally heavy movement of less-carload traffic. Approximately 30 per cent of box car loadings in the recent past have been merchandise traffic.

The principal reason ascribed for the heavy l.c.l. loading is the fact that the commodities ordinarily shipped in carload lots are now shipped less-carload to spread them out so they will reach around. A second cause frequently cited is that shippers would consign in carload lots if more cars were available. As it is, they ship l.c.l. to get their products off the floor.

The shortage of motor truck service and the differential in rates in favor of the railroads by reason of successive increases in truck rates during the war are also heavy contributors to l.c.l. volume.

One observer has gone so far as to state that, because industrial concerns are using trucks more widely for large lots, in lieu of the freight cars they cannot obtain, there are fewer trucks available for small-lot shipments, and that, as a result there has developed a "crazy pattern" in which the railroads and the trucks each get the traffic for which they are least suited.

Remedies for Congestion

Due chiefly to the abnormal volume, the movement of less-carload freight suffers particular congestion. Some of the remedies for this condition being applied by the carriers in many instances are as follows:

- (1) Increased availability of pick-up and delivery trucks in large cities along with inducements to shippers to increase use of their own vehicles for drayage.
- (2) Many railroads have established three tricks at freighthouses.
- (3) Where the volume of traffic is justified and the physical character of the freighthouse permits, railroads are mechanizing freight-handling operations.
- (4) Loud speakers in freighthouses have proved useful not only in reducing man-hours and creating more satisfactory operating conditions, but have also minimized incorrect loading of freight.
- (5) Increased use of coordinated motor

truck service, together with the zoning of package cars, has continued.

(6) A number of railroads have established special staffs to deal with l.c.l. freight. The Boston & Maine, for example, created a special organization composed of representatives of the operating, freight claim and traffic departments to improve the handling of l.c.l. through houses and transfers and to aid shippers improve packing and loading. The New Haven has just established a new merchandise department, headed by a general merchandise manager, with both operating and traffic duties.

Tackling Loss and Damage . . .

Claims incurred by the carriers for freight loss and damage reached the unprecedented figure, in 1946, of \$94,300,672, compared with \$59,760,000 in 1943, a year of heavier traffic volume. It is estimated that 35 per cent is the maximum proportion of the increase due to the rise of prices of the replaced items. The remainder of the increase must be attributable to a loss in efficiency by all parties.

Virtually every shipper is familiar with the causes of loss and damage, such as heavier loading of cars, inferior packaging as compared with prewar practices, less experienced personnel on shipping platforms, and deteriorated rolling stock. A somewhat new problem in loss and damage prevention is the fact that a large number of commodities are moving in railroad service which never so moved before, many of them having been developed during the war. It is the problem of the carriers and the shippers jointly to ascertain the best possible packaging for these new commodities.

Packaging in general is becoming a more live subject on the railroads than ever before in history. Evidence of this interest is the heavy participation of the railroads in the Materials Handling and Packaging Expositions held this year and last. The Union Pacific has recently appointed an experienced container engineer, whose entire time is devoted to working with shippers on mutual problems of packaging goods for transit. During the year the railroads actively promoted developments in packaging, loading and handling which treat the load as a unit. Among the many developments in this category are glued-unit loading, the palletizing of both carload and less-carload shipments (in connection with mechanical materials-handling equipment), and the strengthening of cartons.

A large number of railroads have also placed special emphasis on the prevention of damage by personal contact with shippers. To mention but a few, the Monon, Louisville & Nashville, Baltimore & Ohio and Canadian National have established staffs of qualified prevention

men to work with shippers in promoting better shipping practices. The Canadian National assigned a qualified inspector to work solely with the Canadian Furniture Manufacturers Association, in order to deal with this particularly troublesome commodity. The New York Central has expanded the activities of its freight loss and damage prevention bureau to include training program at freight stations to educate employees in the handling of small shipments. The Burlington has increased the number of its transportation inspectors by 90 per cent, at the same time reducing the extent of territory assigned to each.

Toward Service Goals . . .

In spite of equipment shortages, congestion, deterioration of equipment, lack of materials, inefficient labor and insufficient net earnings, the freight service offered by the railroads has, in general, shown substantial improvement during the past 12 months. As the report in this issue of the activities of individual roads will indicate, some lines have not only restored their prewar schedules of manifest freight trains, but have improved them still further. Outstanding among service improvements has been the establishment of third-morning delivery on perishable traffic from Florida to New York and other northeastern destinations, and the slicing-off of one day in transit time between the midwestern gateway points and the Pacific coast.

The table of overnight freight trains currently in operation shows a substantial increase, compared with that which was published in the "Freight Progress Annual" of May 25, 1940. The benefits of these expedited services accrue not only to traffic between the terminal cities involved and intermediate points, but also to longer-haul freight which utilizes these services for a portion of its journey.

Of importance probably equal with the establishment of fast convenient schedules for freight trains and through cars, is dependable on-time performance of the schedules published. Many shippers have also expressed the desire to receive advice whenever cars bearing their shipments go "bad order" or are otherwise unduly delayed, so that they can anticipate retarded delivery and make substitute shipments, when necessary.

It is to meet this expressed need of the shippers that the Baltimore & Ohio inaugurated its "Sentinel Service" early this year. Available at regular tariff rates for all types of carload freight, except certain bulk commodities, and originally made effective between 28 cities, the new service comprises two chief features: (1) A "Blue Book"



Obtaining sufficient tight and strong cars for the impending heavy grain loadings is a difficult task

which gives the individual shipper information regarding transit time siding-to-siding in terms of hours and minutes; and (2) an automatic record system—founded upon an extensive Teletype network—by which shippers are informed whenever delays arise.

Against the obstacles of a crazy-quilt postwar economy, the railroads of the country are moving toward the goals, held mutually with their patrons, of fast, convenient freight service for all types of commodities in all kinds of weather; on-time performance of published schedules; eventual elimination of the "drag" freight; and the attainment of the "one-speed railroad." By such endeavor, they will continue to be the "assembly line of the nation."

"FLOORBOARD FREDDY" AND PALS—How death drivers get themselves and fellow passengers into "obit" columns is portrayed cartoon-fashion in a new booklet "Stop, Look, Listen and Live" now being distributed by the Texas & Pacific to employees and shippers along the line. Each driver's method is described in detail. For example, "Herby Hotrock" was the "expert" (he thought) driver who was away like a flash when the signal light turned green. And when he had to wait at a railroad crossing for a train to pass, he fretted until the last car came into sight. As it went by, Herby would whip across the tracks and be a block away before the other cars in the line began to move. "But Herby's speed was his undoing. You see, he never took into account that some crossings have two or more tracks . . ." There was another train coming. End.

Roll-Call Shows Railroads Out for "Hole-in-One" Performance

FREIGHT service at "par" is the immediate aim—a "hole in one" the goal—of the American railroads. Having masterfully surmounted the obstacles before them in their tremendous wartime task, and crossed the postwar "fairway," the carriers are, once again, "on the green."

Restoration of manifest freight trains, curtailed during the war years, heralds even faster "red balls" for the immediate future. New motive power and rolling stock is on order in excess of the present capacity for its production. Currently on order are 582 Diesel-electric, 52 steam and 6 electric locomotives, and 87,080 new freight cars for service on Class I railroads. Improved signaling and communication installations and extensive roadway improvement programs give promise of faster terminal-to-terminal freight trains with greater dependability of schedule.

As of March 18, 1946, the western railroads effected an "across the board" reduction of 24 hr. in transcontinental schedules, and some lines have since cut additional hours between the western gateways and the Pacific coast, with intermediate points benefiting proportionately. Twenty-five railroads have reported 75 separate "overnighters" providing actual first-morning arrival of freight trains and delivery of lading at destinations 300 miles or more distant. (In May, 1940, 26 railroads reported 62 such "overnighters.") In a table accompanying this article, those "overnighters" which operate a distance of 300 miles or more are tabulated, along

with a few outstanding trains accomplishing first-morning delivery to points slightly less than 300 miles distant, or which are competitive to trains of other roads which operate over routes exceeding 300 miles.

Many roads report the use of night passenger trains to handle individual merchandise cars between points where traffic does not justify the operation of a solid overnight freight train.

The carriers are overlooking no means of bettering their "game." Here, briefly, is what the individual players have done and are doing toward their goal of providing a freight service far finer than any heretofore offered.

Atchison, Topeka & Santa Fe—Transcontinental freight schedules have been shortened one day. Faster schedules between Chicago and Texas provide second-morning delivery at Dallas and Fort Worth and third-morning at Houston and Galveston, with comparable accelerated schedules from Kansas City, Mo., and other intermediate points. Texas to California schedules have been shortened one day. Schedules from Oklahoma City, Okla., and Wichita, Kan., to Chicago have been speeded up to provide 36-hr. service for livestock and second-morning arrival on meat. Overnight freight service is provided between Chicago and Kansas City, 449 mi.; Fort Worth and Dallas, Houston and Galveston, 362 mi., and Oklahoma City and Kansas City, 346 mi. In 1946 the Santa Fe handled an increase of 5 per cent in carloads, 58 per cent in gross

ton-miles, and 72 per cent in net ton-miles over the boom year of 1929, establishing a new peacetime high by all measures. With an ultimate aim toward providing a complete transportation service to the public, the Santa Fe Skyway was incorporated. This subsidiary now owns seven aircraft, currently limited to the carriage of air freight on a contract basis. Application has been made for certificates permitting Skyway to operate as a common carrier of freight and U. S. mail.

Atlanta & St. Andrews Bay—The movement of freight trains has been expedited by completion of extensive roadway improvements. Freight operations are now completely Dieselized. Ton-miles, which totaled 10,296,247 in 1930, rose to a wartime peak of 235,936,000 in 1944, and were at a peacetime high of 128,573,000 in 1946.

Atlanta & West Point—This railroad, along with the affiliated Western of Alabama and Georgia, is affording overnight service between all origins and destinations served by the combined 542 mi. of line. This service includes first-morning placement at freighthouses or delivery to classification yards, and in practically all cases, to consignees' side tracks. Total tonnage in 1946 generally exceeded the tonnage handled in 1945.

Atlantic Coast Line—Improved service was made available for fruits and vegetables from Florida to Mid-Western markets via Waycross, Ga., and Atlanta. Improved through dead-freight service was established from Atlanta and Birmingham, Ala., to Jacksonville, Fla., restoring prewar second-day arrivals from Cincinnati, Ohio, to Jacksonville. Freight traffic handled in 1946 was far in excess of that handled in 1926, the Coast Line's previous peacetime peak.

Baltimore & Ohio—During the past year this road established new freight schedules between Wheeling, W. Va., and Willard, Ohio, connecting for Chi-

East meets west many times daily on the steel arteries of America



cago; between Clarksburg, W. Va., and Benwood; between Brunswick, Md., and Baltimore; Cumberland, Md., to Jersey City, N. J., with New England connections; Cumberland to Baltimore, and Willard, Ohio, to Brunswick. "Sentinel Service," embracing principal B. & O. cities, was inaugurated in March of this year, protecting the scheduled movement of cars and setting up a system of automatic records whereby shippers and consignees are promptly advised of any schedule failures. Shippers are furnished with a "blue book" containing separate pages for each of the "Sentinel" cities, complete with a facility map for each and a schedule of cut-off and placement times at freighthouses and team tracks. Blank space is provided in which B. & O. freight representatives insert similar information for industries having private sidings with which the holder of the "blue book" does business.

Carloadings for the four-year period 1943-1946 only slightly exceeded carloadings for a similar period 1923-1926, whereas revenue tons carried one mile increased approximately 40 per cent. A staff of qualified freight service inspectors, one to each operating division, is assigned to give aid to shippers with respect to loading and packaging. Whenever shippers experience repeated loss or damage to their shipments, one of these trained inspectors is made available to suggest preventive remedies.

Bessemer & Lake Erie—The movement of ore, stone and coal continued to be the primary function of the Bessemer. Although no schedule changes were made, the road continued to produce its high level of performance in the movement of miscellaneous merchandise.

Boston & Maine—Running times of B. & M. freights and the dependability of their schedules were greatly improved during 1946, due, in part, according to the company, to the fact that 80 per cent of the total ton-mileage in road freight service was moved behind Diesel-electric motive power. Overnight operation of the "Bullet" between Portland, Me., and Harlem River, N. Y., via B. & M. to Worcester, Mass., and the New Haven, 334 mi. southbound and 338 mi. northbound, was continued in effect. The year 1946 marked a new peacetime high in ton-miles, exceeding those of 1929 by 24 per cent and falling only 21 per cent short of the all-time war peak of 1943. During 1946 a special organization composed of representatives of the operating, freight claim, and traffic departments was set up to improve the railroad's handling of l.c.l. freight through freighthouses and transfers, and to aid shippers in improving practices.

Canadian National—During 1946 the Canadian National established an additional freight train leaving Montreal at

Thoroughbreds of the Freight Fleet

"Overnighters" Offering First-Morning Delivery Over a 300-Mile Range

Railroad	From	To	Mileage
A. T. & S. F.	Chicago	Kansas City*	449
	Dallas	Galveston*	362
	Oklahoma City	Kansas City*	346
B. & M.-N. Y. N. H. & H.	Portland, Me.	New York*	338
C. N.	Toronto	Montreal*	334
C. P.	Toronto	Montreal*	351
C. of G.	Savannah	Atlanta*	294
C. & O.	Chicago	Cincinnati*	282
C. & E. I.	Chicago	Evansville*	287
	Chicago	St. Louis*	290
C. & N. W.	Chicago	Ames	327
	Omaha	Clinton	347
	St. Paul	Milwaukee	311
C. I. & L.	Chicago	Louisville*	325
	Michigan City	Louisville*	297
C. R. I. & P.	Omaha	Moline*	329
	Moline	Kansas City*	336
D. L. & W.	Kansas City	El Reno	381
F. E. C.	Hoboken	Buffalo	395
G. N.	Jacksonville	Miami	366
G. N.	Minneapolis	Grand Forks	329
I. C.	Chicago	Memphis	510
	E. St. Louis	Memphis	313
K. C. S.-L. & A.	Shreveport	New Orleans	313
L. & N.	Cincinnati	Nashville	297
	Cincinnati	Knoxville*	292
	Nashville	Montgomery	302
	Montgomery	New Orleans*	318
	E. St. Louis	Louisville	314
M. K. T.	St. Louis	Parsons	387
	Ft. Worth	Houston*	327
	Dallas	Houston*	339
	Kansas City	Oklahoma City	343
	Dallas	San Antonio*	293
M. P.	St. Louis	Kansas City*	282
	Texarkana	Memphis	294
	Houston	Fort Worth*	295
	St. Louis	Memphis	328
	St. Louis	Little Rock	343
	St. Louis	St. Joseph	353
	St. Louis	Wichita	478
	St. Louis	Joplin	378
	Pueblo	Hoisington*	339
	E. St. Louis	N. Little Rock	369
	Texarkana	Van Buren	300
	Longview	San Antonio	340
	Fort Worth	San Antonio*	337
	Hoisington	Atchison	349
N. C. & St. L.	Atlanta	Nashville*	288
N. Y. N. H. & H.-P. R. R.	Boston	Philadelphia	330
N. Y. C.	New York	Buffalo*	429
	Chicago	Cincinnati*	302
N. Y. C. & St. L.	Chicago	Cleveland*	336
P. R. R.	New York	Pittsburgh*	426
	Philadelphia	Pittsburgh	344
	Baltimore	Pittsburgh	326
	Chicago	Columbus*	308
	Chicago	Louisville*	305
	Chicago	Cincinnati*	292
St. L.-S. F.	St. Louis	Memphis	305
	St. Louis	Tulsa	424
St. L. S. W.	St. Louis	Pine Bluff	398
Southern	Cincinnati	Chattanooga*	338
	Cincinnati	Knoxville	311
S. P.	San Francisco	Los Angeles*	469
	Portland	Medford	329
	Los Angeles	Tucson	502
T. & P.	Dallas	Big Spring	298
Wabash	Chicago	St. Louis	286

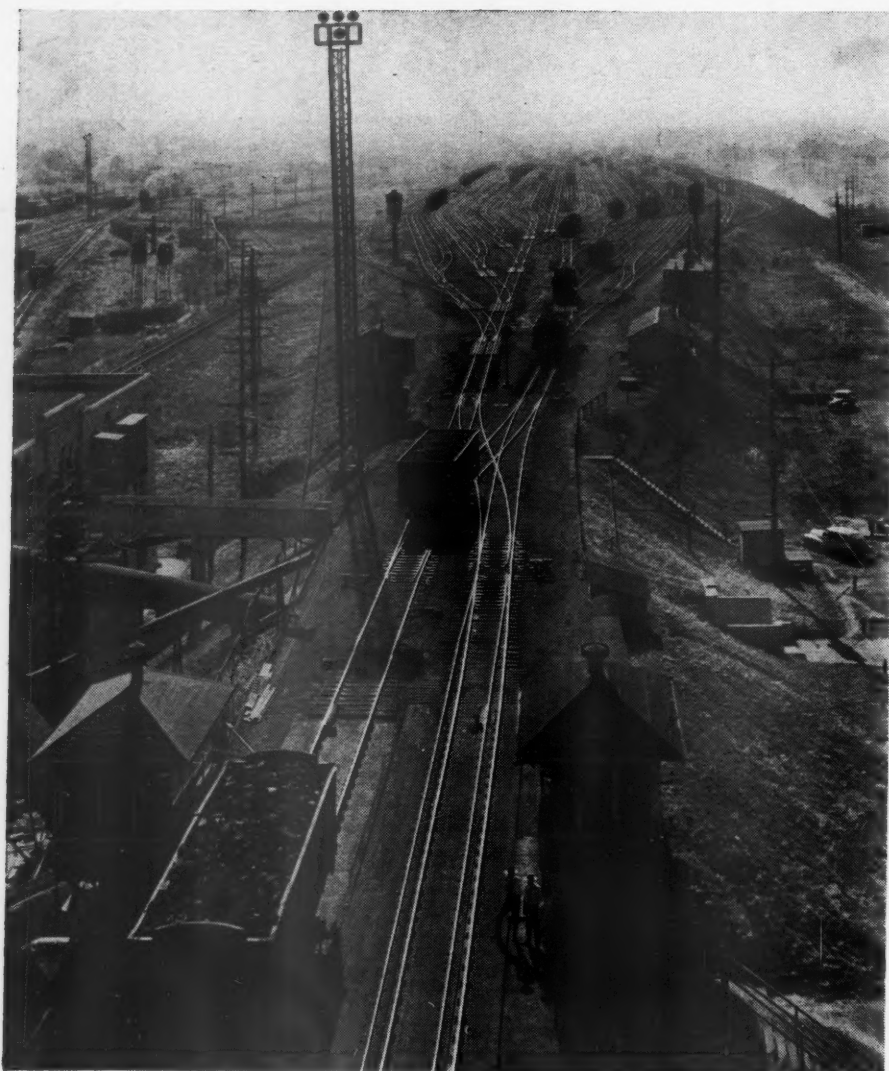
* Train operates in both directions.

9:00 a.m. daily, arriving at Halifax, N. S., at 3:00 p.m. the second day, handling domestic traffic from Montreal to the Maritime provinces. A Windsor (Ont.)-Toronto freight was also established to handle automobile traffic. Efforts were directed toward re-establishment generally over the system of fast prewar freight schedules, placed more or less in abeyance during wartime peak traffic periods. Train Nos. 444 and 495 provide overnight service on the 335-mi. Montreal-Toronto run, carrying merchandise and important carload freight.

Carloadings, including receipts from connections, rose during 1946 to exceed even wartime peaks, but net ton-miles decreased somewhat, due to a reduction in average revenue haul from 452 mi. in 1943 to 390 mi. in 1946. During 1946 a full-time loading supervisor was attached to the damage prevention organization to work with the shippers in their load-

ing problems, and a qualified inspector was assigned to work with the Canadian Furniture Manufacturers' Association to reduce damage occurring to this class of freight. To accommodate shippers who specialize in small and valuable packages, liable to become lost or crushed, several so-called "value boxes" were constructed and placed in l.c.l. service between strategic points. These devices are proving highly effective in the reduction of loss and damage and—more important—in discouraging pilferage.

Canadian Pacific—During 1946 this road put into effect new freight train schedules, including one transcontinental run and one from Toronto to Fort William, Ont., to handle increased traffic between eastern and western Canada; two between Wells River, Vt., and Detroit, Mich., and one between Wells River and Sault Ste. Marie, Ont., to



Modern classification yards simplify the blocking of cars and minimize yard terminal delays

handle border-to-border traffic; and one from Montreal to Saint John, N. B., providing second-morning delivery on that 481-mi. run. Overnight freights are operated between Toronto and Montreal. In addition, renewed emphasis has been placed on "on-time" performance of existing freight schedules.

Freight ton-miles in 1946 neared the 26 billion mark, a 5 billion increase over the prewar peak year of 1928, and a 4 billion decrease from the 1944 all-time high. Installation of teletype between many principal cities and an increase in tracing staffs are providing shippers with improved car record information.

Central of Georgia — Accelerated freight schedules were put into effect by the Central of Georgia and its connections, commencing with the Florida fruit shipping season in the autumn of 1946. One Florida perishable train is now scheduled to leave Albany, Ga., at 2:30 a.m., arriving in Atlanta at 8:00 a.m., and similar accelerated perishable service is provided from Albany to Birmingham, Macon, Ga., to Atlanta, and Macon

to Birmingham. Train No. 34 leaves Atlanta at 11:00 a.m., arriving at Savannah, Ga., 294 mi. distant, at 6:00 a.m., providing placement of merchandise cars by 8:00 a.m. and carload shipments by 9:00 a.m. Principal terminals on the C. of Ga. are within a 100-to-195-mi. range and overnight l.c.l. and carload service generally is available. Special loss and damage inspectors were appointed to make personal calls on shippers to promote careful packing and loading of freight. Net ton-miles in 1946 decreased appreciably from the wartime peak, but were 77.5 per cent greater than the net ton-miles of 1930, and somewhat exceeded the 1926 figure.

Chesapeake & Ohio—Effective May 1, this railroad inaugurated a new fast freight train, No. 90, from Chicago and Cincinnati to Richmond, Va., Newport News and Norfolk. Lopping a full day from schedules previously in effect, No. 90 covers the 940-mi. run between its terminals in 44 hr., avoiding intermediate yards wherever possible, and will be powered by newly-delivered high-

speed steam locomotives. The C. & O., together with the Pere Marquette (with which its consolidation is in process), is preparing additional new and improved freight schedules to be placed in effect soon.

C. & O. carloadings for the first 13 weeks of 1947 continued to mount, exceeding carloadings for the comparable periods of 1944, 1945 and 1946 by approximately 9 per cent, and exceeding 1927 loadings by approximately 38 per cent.

Chicago & Eastern Illinois — New overnight freight schedules have been established between Chicago and Evansville, Ind., 287 mi., the southbound service being inaugurated primarily to provide overnight merchandise service. Overnight schedules are also in effect between Chicago and St. Louis handling merchandise and manifest-type carload freight. Further improvements in schedules are planned for 1947 incident to the installation of centralized traffic control on 120 mi. of main line.

Chicago & North Western—Principal time-freight trains have been speeded up between important terminals and gateways. No. 251, the "Round-up," has been speeded up 6 hr. between Chicago and Council Bluffs, Iowa; No. 483, the "Chief," makes its Chicago, St. Paul, Minn., run in four hours less time, and No. 490, the "Sunbeam," runs from St. Paul to Chicago in seven hours less than its wartime schedule. Among its over-nighters are the "Aksarben," Chicago to Ames, Iowa, and Boone, 327 mi.; the "Calumet," Council Bluffs to Clinton, Ill., 720 mi.; and the "Mohawk," Twin Cities to Milwaukee, Wis., 311 mi. These speedsters carry both l.c.l. and carload freight.

Total ton-miles produced by the C. & N. W. during 1946 reached the 10 billion mark, only slightly below the average of the four war years, double the total of 1938, and nearly 2 billion greater than the total for the boom year of 1928.

Chicago, Burlington & Quincy—Effective March 18, 1946, the Burlington, along with its western connections, shortened transcontinental schedules by 24 hours. During 1946 the C. B. & Q. handled nearly 17 billion ton-miles of revenue freight, compared with a wartime peak of nearly 20 billion and a prewar peak of about 13 billion. The number of transportation inspectors has been increased approximately 90 per cent, reducing the size of the territory assigned to each and enabling more frequent contact with the shippers to aid in shipping, loading and packing problems.

Chicago, Indianapolis & Louisville—

Effective July 21, 1946, the Monon established overnight schedules between all stations on the railroad. Train No. 71 now departs Chicago Outer Yard at 10:00 p.m. daily, arriving at Louisville, Ky., at 7:00 a.m., accomplishing the 321-mi. run in 9 hr., a reduction of 295 min. from the previous schedule. Scheduled freight service between Louisville and Michigan City, Ind., was reduced 8 hr. 45 min.; and between Indianapolis, Ind., and Chicago, 7 hr. 30 min. is saved. Further schedule improvements will be made with deliveries of additional Diesel motive power now on order, and as extensive improvements included in the line's roadway program are accomplished. Modernized freight-houses, with new mechanized equipment, are planned to expedite freight handling.

A new position — traveling claim agent—has been established to assist shippers in achieving better shipping practices and to reduce freight claims. Ton-miles handled during the six-month period ending January 31, 1947, were 8.1 per cent under the same period of 1944 (the Monon's peak war period), but showed a 19.9 per cent increase over the same period one year ago.

Chicago, Milwaukee, St. Paul & Pacific—During 1946 this railroad effected a 24-hr. reduction in its schedules between Chicago, the Twin Cities and the Pacific Northwest. Intermediate points benefited accordingly. Merchandise freight is being handled in baggage cars on overnight passenger trains between Butte, Mont., and Spokane, Wash., 357 mi. Net ton-miles during 1946 were substantially increased over the peak years of the Twenties, but were below the wartime peaks.

Chicago, Rock Island & Pacific—In the latter part of March, 1946, transcontinental freight schedules were shortened by 24 hr. During late 1945, and principally in 1946, the Rock Island inaugurated "Rocket Freights" between Chicago-Kansas City-Los Angeles; Chicago-Denver-San Francisco; Chicago-Kansas City-Houston; Minneapolis-St. Paul-Kansas City-Fort Worth-Houston; and Chicago-Minneapolis-St. Paul. Powered by new 4,050-hp. Diesels and 4-8-4 steam locomotives, these fast freights are timed to the minute on such fast runs as, for example, No. 93, which runs from Chicago to Kansas City, 510 mi., in 19 hr. 30 min. To eliminate terminal delays, radio receivers and transmitters have been installed at principal classification yards for communication between yard forces and switch engines. To expedite its l.c.l. service, the Rock Island has appointed a manager of merchandise service, whose duties are, wherever possible, to eliminate excessive handling at transfer points and

speed up schedules, cooperating with shippers and connecting carriers.

Freight traffic on the Rock Island during 1946 exceeded that of any peacetime year and compared favorably with the peak war years, carloadings during 1946 totaling 1,583,909, compared with 1,620,760 in 1945 and 1,586,236 in 1944.

Clinchfield—Clinchfield No. 97, which handles Florida perishable traffic for the Central West, is scheduled to leave Spartanburg, S. C., on the arrival of the Charleston & Western Carolina connection at 1:45 p.m., and arrive Elkhorn City, Ky., (277 mi.) at 2:00 a.m., 12 hr. 15 min. later, for connection with the C. & O.

Delaware, Lackawanna & Western—A new fast merchandise train, the "Pioneer," was established June 24, 1946, between Hoboken, N. J., (terminal for New York) and Buffalo, N. Y., serving principal intermediate points, and connecting with the Nickel Plate for Cleveland, Ohio. Overnight service is provided on the 396-mi. run to Buffalo, with a 1:00 p.m. arrival at Cleveland. Schedules of trains NE-4, NE-6 and BS-2

were changed and accelerated to provide earlier arrivals on eastbound traffic from Buffalo to D. L. & W. points and New England.

Revenue freight during 1946 totaled 27,348,196 tons, a decrease of 8.8 per cent under 1945, but the greatest peacetime volume of freight (excluding anthracite) ever handled.

Denver & Rio Grande Western—The Rio Grande has concentrated on expeditious handling in yards and terminals and on-time performance of road schedules, and reports that a high percentage of on-time performance is being maintained. Overnight l.c.l. freight service is provided by use of passenger trains between Denver, Col., and Alamosa, 247 mi., Delta, 326 mi., and points intermediate. Net ton-miles in 1946 exceeded 4 billion, compared with 6 billion in 1943, an all-time high for the D. & R. G. W., and 2½ billion in 1929.

Duluth, Missabe & Iron Range—The D. M. & I. R. is rendering overnight carload and l.c.l. service from Duluth, with early morning deliveries at all northern terminals.



Full effectiveness of modern motive power is achieved when the track and signaling standards keep pace

Florida East Coast—This railway has established a new freight schedule for the handling of perishables during the shipping season, starting at Fort Pierce, Fla., and picking up as far north as New Smyrna, affording these points a closing hour of 9:00 p.m. with a delivery to connections at Jacksonville (242 mi. from Fort Pierce) at 8:00 a.m. next morning. By means of northern connections, this service effects a third-morning delivery at New York and Philadelphia, Pa., markets. A new line of railroad, 29.5 mi. in length, now brings the productive Lake Okeechobee area 130 mi. closer to the main line at Fort Pierce and permits a saving of 24 hr. in deliveries to New York, Philadelphia and Chicago markets.

The F. E. C. is operating a fast over-

night merchandise train, filled out with carloads, from Jacksonville to Miami, 366 mi. Scheduled departure from Bowden yard, Jacksonville, is 7:00 p.m., with a 6:30 a.m. arrival at Miami. Cars are set out at important intermediate points, providing first-morning delivery at practically all major points on the railroad. An automobile unloading service has been set up at Miami and West Palm Beach at a charge of \$1.88 per automobile. It is reported that consignees have been most receptive to the new arrangement and that railroad unloading is being specified by practically all receivers at these two points.

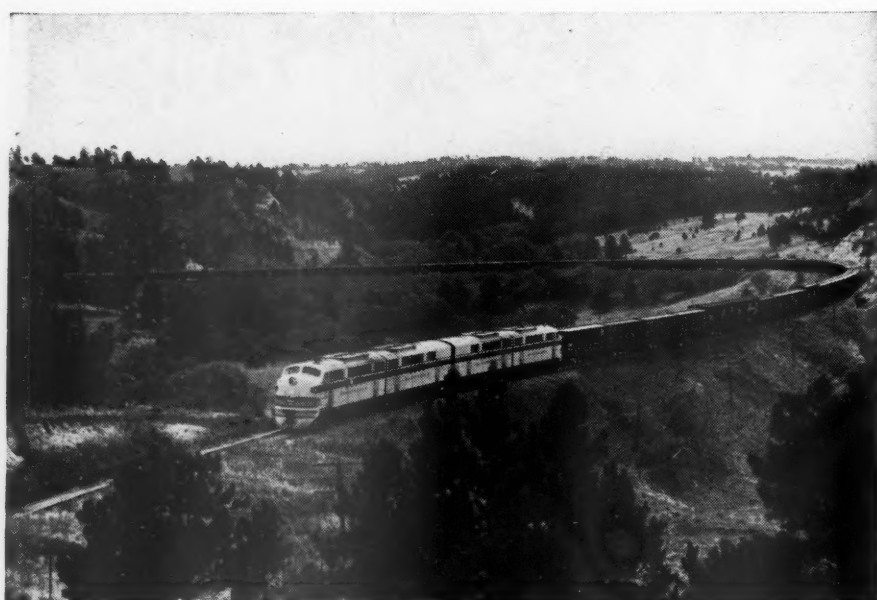
Great Northern—Effective March, 1946, prewar continental freight service was restored. Trains Nos. 401 and 402

are making fifth-morning delivery between the Twin Cities and the West coast. Overnight service is provided from Minneapolis, Minn., to Fargo, N. D., 231 mi., and Grand Forks, 329 mi. distant, handling both merchandise and straight carload shipments, distributing merchandise to branch lines and points beyond. Passenger train No. 28 handles merchandise overnight from Seattle, Wash., to Spokane and Wenatchee.

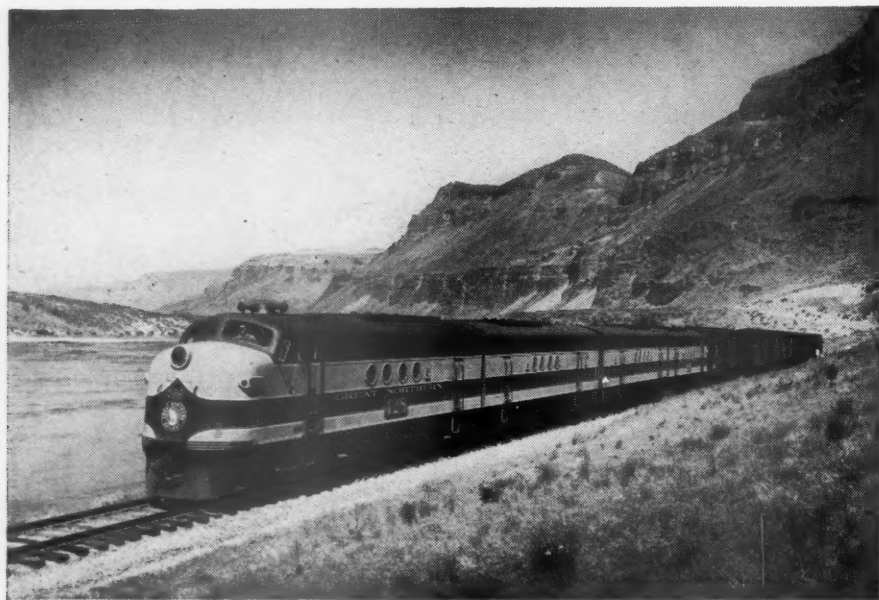
Illinois Central—During 1946 many improvements were made in I. C. freight service. Train CS-3 was established from Chicago to East St. Louis, Ill., with connections for the west. Transit time of "dispatch freights" between Chicago and Council Bluffs, Iowa, were shortened to coincide with restoration of prewar transcontinental service. Not only was a full day dropped from the time, but, in addition, present service is five hours faster than prewar between Chicago and Pacific coast points. Train NC-4 was inaugurated from New Orleans, La., to Chicago, with connections at Jackson, Miss., for the Meridian gateway. ML-2, Memphis, Tenn., to Louisville; was speeded up, and ML-4 adjusted, to provide better connections with the B. & O. at Louisville. Banana train schedules from New Orleans to Chicago were shortened five hours, with corresponding speed-ups to intermediate points and connections. Trains SE-1 from Chicago and SM-1 from St. Louis were inaugurated to expedite the movement of traffic to and via Memphis. Overnight service with first-morning delivery of l.c.l. freight is provided by train MS-1, Chicago to Memphis, 527 mi., and SM-3, East St. Louis to Memphis, 316 mi. Additional schedule improvements are contemplated later in 1947. In 1929, 2,351,102 cars (an all-time peak) handled 15½ billion ton-miles, while in 1946, 2,088,223 cars handled 18¼ billion ton-miles.

Kansas City Southern—Along with the Louisiana & Arkansas, the K. C. S. has reduced the running time of three southbound and three northbound freights between Kansas City and Shreveport, La. Train No. 77 provides first-afternoon service between Kansas City and Texarkana, 487 mi., and protects second-morning arrival at Beaumont, Tex., Port Arthur, Alexandria, La., Baton Rouge and New Orleans. Upon delivery of new Diesel motive power now on order, the company contemplates additional accelerations in its freight schedules. Ton-miles for 1946 increased 45.8 per cent over 1941 but decreased 24.9 per cent from the 1944 wartime peak.

Lehigh & New England—The L. & N. E. continued its policy of running all trains "extra" to meet the heavy



Above—New Diesel freight power helps maintain accelerated transcontinental schedules. Below—5,400-hp. Diesel road freight locomotives handle tonnage trains non-stop across whole divisions



"bridge" traffic tendered to it by connections. Traffic volume during 1946 declined from the wartime peak but was substantially higher than the peak attained in the Twenties.

Lehigh Valley—Full restoration of prewar schedules has improved Lehigh Valley through service between its terminals and connections at Buffalo, N. Y., and Suspension Bridge and its eastern terminals. Revenue ton-miles produced during 1946 totaled approximately 5 billion, compared with a 1944 wartime peak of 9 billion, but were slightly in excess of the 1929 figure.

Louisville & Nashville—This railroad re-established schedules from Atlanta and its southern connections to Cincinnati giving third-morning delivery of Florida perishable traffic at Cincinnati and fourth-morning delivery at Chicago, Detroit, Toledo and Cleveland. A southbound schedule was established from Cincinnati to Atlanta and connections providing second-morning delivery to Macon, Ga., Albany, and Jacksonville, Fla. The "Silver Bullet," an all-merchandise train, is making the run from Cincinnati to New Orleans in 37½ hr. Overnight runs are operated between Montgomery, Ala., and New Orleans, 318 mi.; Cincinnati and Knoxville, Tenn., 292 mi.; Cincinnati and Nashville, Tenn., 297 mi.; East St. Louis, Ill., and Louisville, Ky., 314 mi.; and Nashville and Montgomery, 302 mi. All efforts are directed toward the on-time performance of existing schedules.

At freighthouses where physical conditions permit and volume justifies, tractors and trailers are taking the place of old hand trucks, and use is being made of modern self-propelled roller dollies and dolly levers for lifting, handling and stowing heavy articles. Loud speakers have been installed at some of the larger freighthouses and surveys are being conducted with a view toward extensions. The road has found that, in addition to saving labor and creating more satisfactory operating conditions, loudspeakers minimize the incorrect loading of freight. A special department has been established to handle claim prevention and works closely with shippers to assist them in packing and handling problems. Net ton-miles in 1946 totaled 16 billion, slightly below the war peak, but 14 per cent over 1941 and 15 per cent over 1929.

Minneapolis & St. Louis—Fast freight trains Nos. 19 and 20 are accomplishing the 487-mi. Minneapolis-Peoria run in 17½ hr. in each direction, and are designated by the road's time card as "first class" trains. Revenue freight carried in 1946 totaled 8,087,533 tons, a decline from 8,739,320 in 1945,

but a substantial increase over the 4,786,494 tons carried in 1936, which represented an average annual tonnage for the decade preceding the war years.

Minneapolis, St. Paul & Sault Ste. Marie—This road is anticipating the establishment of accelerated freight schedules between Minneapolis and Chicago, coincident with changes by eastern connections, later this year. Average net ton-miles handled by the Soo Line for January, 1947, were approximately 10 per cent under the wartime average but approximately 10 per cent greater than the average for the peak years of the Twenties.

Missouri - Kansas - Texas — The "Katy's" fleet of fast scheduled freight trains, connecting the Southwest with St. Louis and Kansas City, was augmented on February 1 by the inauguration of train No. P-1, a fast perishable service from California and Arizona in connection with the Texas & Pacific and Southern Pacific. Train No. P-1 is providing sixth-morning delivery at Kansas City and sixth-evening delivery at St. Louis on traffic from Colton, Cal., with proportionately shorter schedules from the Imperial and Salt River Valley producing areas. Modernization, with an eye toward efficiency, has been completed at the St. Louis freighthouse, and similar work is in progress at Dallas and Houston.

Carloadings for the first three months of 1947 exceeded those of the corresponding periods of 1946 and 1942, but dropped considerably from the 1943-to-1945 peak loadings.

Missouri Pacific—In December, 1946, Train No. 67, handling transcontinental traffic from St. Louis via southwestern connections, was divided into three sections, classified according to destinations and routing. Effective April 1, 1947, a new run-off schedule leaving East St. Louis at 3:00 a.m. was inaugurated to handle freight received too late for the three sections of No. 67. This train overtakes No. 67 at El Paso. Effective April 6 a new "red ball" morning train was established from Kansas City, Mo., to Fort Worth, in connection with the Kansas, Oklahoma & Gulf and Texas & Pacific, providing double-daily service via this route. Train No. 61, handling transcontinental traffic from St. Louis via western connections at Pueblo, Col., now operates without stopping at Kansas City and a Kansas City connection has been established.

Several experiments in by-passing intermediate terminals are being conducted, with still others under consideration, for reduction in overall transit time. Overnight service is provided for

both carload and l.c.l. freight between many principal Missouri Pacific stations up to as much as 478-mi. distant, and special arrangements generally are in effect for placement of merchandise cars within one hour after arrival.

National Railways of Mexico—Effective January 1, scheduled freight service on a 64 hr. basis was established in both directions between Laredo, Tex., and Mexico City, Mex., and further speed-ups are contemplated. Freight and storage facilities on the Mexican side at Laredo are being enlarged to facilitate customs inspection and reduce congestion at the border. At recent meetings with American connections, use of through bills of lading was discussed to expedite international traffic. Separate positions of freight traffic manager and passenger traffic manager were recently established in lieu of the former position of traffic manager.

Nashville, Chattanooga & St. Louis—This railway offers overnight service between Nashville and Atlanta, 288 mi., and between Nashville and Memphis, 239 mi. Train No. M-1 traverses the 527-mi. main line from Memphis to Atlanta in 21 hr. 45 min. Line improvements being completed this spring will shorten the main line by 3.4 mi., eliminate 71 curves and reduce the curvature of 130.

New York Central—With the return to peacetime operations, "Pacemaker" freight service was introduced between New York and Buffalo, providing overnight service on l.c.l. freight for the 435-mi. run, and, through direct connections, providing second-morning delivery at points as far away as Detroit, Indianapolis and Cincinnati. A pool of 425 cars has been made available for "Pacemaker" service, and equipment so assigned is specially equipped for high-speed service and painted in bands of gray and vermilion so that they may be readily identified as assigned cars.

The New York Central's freight traffic volume during 1946 exceeded all previous peacetime records, including the peak years of the Twenties. The activities of its freight loss and damage prevention bureau have been expanded and a freight station training program was instituted to educate employees as to the causes and remedies for loss and damage to shipments.

New York, Chicago & St. Louis—Prewar manifest freight train schedules have been restored on the Nickel Plate, and merchandise and carload freight is being handled overnight in both directions between Chicago and Cleveland, a distance of 340 mi. The volume

of freight handled has increased over prewar years, loaded freight car-miles being approximately 10 per cent greater in 1946 than in 1929. At the same time, freight train speeds increased from an average of 14.2 m.p.h. in 1929 to 18.7 m.p.h. in 1941 and 18.9 m.p.h. in 1946, reflecting the operational gains resulting from centralized traffic control installations, extensions to passing sidings, automatic signal and interlocking installations, curve reductions and line changes completed during the year just past.

New York, New Haven & Hartford—An overnight merchandise freight is operated in connection with the B. & M.

between Harlem River (New York) and Portland, Me., 338 mi., and in connection with the Pennsylvania between Boston and Philadelphia, 330 mi. Revenue tonnage handled during 1946 totaled 29,627,041, compared with an average tonnage of 35,995,482 for the four previous years, 27,516,111 for 1941 and 19,857,705 for 1936.

Operating and traffic staffs have been partially reorganized to establish a merchandise traffic department under a general merchandise manager, a newly-created position.

New York, Susquehanna & Western—The Susquehanna completed and placed in service this March two

freight yards at Edgewater, N. J. (across the Hudson from New York), to handle traffic interchanged with Seatrail Lines (normally giving water carriage of freight cars to Havana, Cuba, and Gulf ports). One 75-car yard handles carload shipments to and from the ships, and service is expedited to permit delivery to ships of traffic received from connecting railroads up to noon on date of sailing, and same-day delivery to connections on arrival of ships. A 120-car yard handles team traffic.

Norfolk & Western—This railway established new through freight train schedules during the early part of 1946, speeding up the movement of freight all along the railroad. Train No. 86 has been scheduled to leave Cincinnati and Columbus, Ohio, at 9:00 p.m., with 4:45 a.m. second-morning arrival at Norfolk. This new schedule saves as much as one day in the delivery of freight from the midwest to Virginia and Carolina destinations. Gross ton-miles handled in January, 1947, exceeded January, 1946, by 10 per cent; were only about 2 per cent under the record month of March, 1945; and were substantially higher than in the best months in the peak years of the Twenties. An extensive improvement and modernization project is under way to improve operating conditions and expedite the movement of trains.

Norfolk Southern—During the year just past this railway has made improvements in freight schedules resulting in the reduction of approximately two hours' running time over its line, and is currently working toward improved connections for service between the South and East. Tons of revenue freight carried one mile in 1946 totaled 580,370,278 compared with a wartime peak of 676,828,422 in 1943, and a 1926 total of 515,428,579.

Northern Pacific—Prewar schedules have been re-established on transcontinental freights, and overnight l.c.l. freight service has been introduced from Seattle and Tacoma, Wash., to Walla Walla and Spokane, the merchandise cars being handled on passenger trains. Twenty refrigerator cars have been specially fitted up for handling combination perishable and dry merchandise on branch lines.

Pennsylvania—This railroad is operating 11 overnight freight trains within a range of approximately 300 miles or more, the most notable of which is LCL-1, providing first-morning placement and first-day delivery of New York merchandise at Pittsburgh, 426 mi. distant. Special representatives have



Above—Teletype consists of arriving trains speed classification at modern car retarder yards. Below—Bulk containers for shipment of special commodities typify extensions of special services for shippers



been assigned at many principal stations who are contacting hundreds of firms each month offering advice and suggestions with respect to proper packaging, loading, and related shipping problems. More new permanent industries located along the lines of the Pennsylvania during 1946 than in any previous year on record. Revenue ton-miles produced during 1946 totaled nearly 57 billion, a decrease of approximately 20 per cent under 1944, but almost 20 per cent in excess of the ton-miles produced in 1929.

Reading—Efforts have been concentrated on the maintenance of schedules of existing symbol trains. Net ton-miles totaled 8,308,053, approximately 10 per cent under the wartime peak attained in 1944, but approximately 10 per cent over the peak total of the Twenties. Its claim prevention department offers active assistance to shippers in methods of crating, packing, blocking and loading shipments, particularly where new type commodities are being shipped.

Seaboard Air Line—Second-morning service from Jacksonville to Cincinnati, via Seaboard Air Line and connections, has been re-established. Freight schedules from Birmingham and Atlanta to the Richmond gateway have been substantially improved. Fast overnight freight trains, providing next-day arrival on both merchandise and carload freight, are operating between many Seaboard cities 300 mi. or more distant. Net ton-miles produced in 1946 were more than double those of the previous peacetime peak of 1926, and only about 10 per cent less than those of the 1944 wartime peak.

St. Louis-San Francisco—In addition to a return of all scheduled freight trains to prewar time, the Frisco established No. 136 between Birmingham and Memphis, connecting for St. Louis and Kansas City, and speeded up principal fast freights between St. Louis, Kansas City and the Southwest. Train No. 835, carrying carload and l.c.l. freight, runs 305 mi. from St. Louis to Memphis overnight. Train No. 37, carrying practically all merchandise, but "filling out" with other freight, runs overnight from St. Louis to Tulsa, Okla., 425 mi., with first afternoon arrival at Oklahoma City, 542 mi. Overnight service for both carload and l.c.l. freight is provided between St. Louis and Memphis, 305 mi. By use of passenger trains, merchandise cars are operated overnight between Memphis and Pensacola, Fla., 434 mi.

St. Louis Southwestern—The "Blue Streak," solid merchandise train from

St. Louis, gives Cotton Belt freight first-morning delivery at Pine Bluff, Ark., 398 mi. distant. Tons carried one mile, while down from the peak of the war years, were nearly three times the 1929 figure.

Southern—During 1946 the Southern established new and improved freight train operations and speeded up the classification of trains; and it is currently studying traffic patterns to determine needs for additional improvements. A second section of train No. 59 was inaugurated from Cincinnati to the Southeast. First No. 59, departing at 11:00 a.m., is blocked for points south of Chattanooga, Tenn., including Atlanta, Ga., Macon, Jacksonville, Fla., and beyond. The new section of No. 59, leaving at noon, is blocked for Knoxville, Tenn., and the Carolinas and Virginia territory beyond. The "Spark Plug," Diesel-powered Cincinnati-Atlanta freight, departs at 6:00 a.m., arriving Atlanta, 491 mi. distant, at midnight same date, carrying automobiles and automobile parts and other classified tonnage for Atlanta and beyond. Two sections of Louisville No. 59 now operate, one carrying only southeastern traffic for points beyond Chattanooga; the other blocked and classified to handle Knoxville, Carolina and Virginia traffic exclusively. Trains from St. Louis are similarly classified and intermediate terminal delays have thus been reduced to a minimum.

The Southern's freight traffic is at a record peacetime high.

Southern Pacific—Freight schedules in effect prior to November, 1942, were restored on all transcontinental manifest trains during 1946, resulting in a one-day saving. The fast "overnight" merchandise train, which in some cases are hauled by the same locomotives which pull passenger trains during the day, were re-established between San Francisco and Los Angeles, 470 mi.; Portland, Ore., to Medford, 329 mi.; and from Los Angeles to Phoenix, Ariz., and Tucson, 424 mi. and 502 mi., respectively. These fast trains are composed of assigned cars and handle merchandise only. Early traffic trends for the year 1947 indicate that net ton-miles will almost equal the 1944 wartime peak, which was five times that of the 1932 low and more than double the 1929 prosperity peak.

Spokane, Portland & Seattle—Overnight train service has been established between most points on the S. P. & S. for both carload and l.c.l. freight, and, in addition, l.c.l. is being handled in merchandise baggage cars on overnight passenger trains between Portland, Ore.,

and Spokane, Wash., providing an 8:45 p.m. departure with a 6:50 a.m. arrival for the 380-mi. run.

Texas & Pacific—During 1946 the T. & P. and its connections restored the guaranteed transcontinental freight schedules that were in effect prior to the war. In April, 1947, additional fast Fort Worth-Kansas City service, with connections for and from Houston and San Antonio, was inaugurated in conjunction with the Kansas, Oklahoma & Gulf and Missouri Pacific railroads. Merchandise service between New Orleans and Shreveport, La., 325 mi., is handled overnight in specially equipped box cars on regular passenger trains. A similar service is in effect from El Paso, Tex., to Monahans, 252 mi., and offers a T. & P. Motor Transport truck connection to Hobbs, N. M., an additional 84 mi. distant, for first-morning delivery. An overnight merchandise train is operated from Dallas and Fort Worth to Big Spring, 298 mi., with rail connections for same-morning delivery as far west as Monahans, 394 mi. from Dallas, and with T. & P. Motor Transport connections for Hobbs, N. M., 412 mi. While net ton-miles have fallen since the 1944 war peak, 1946 figures closely approximated the 1928 boom year.

Jointly with the West Texas Chamber of Commerce, the T. & P. is sponsoring an economic study to determine measures for developing certain areas along its lines. In February, 1947, Teletype service was inaugurated between the Dallas general offices and offline agencies, and a service bureau was established at Dallas to improve tracing information and expedite diversions.

Union Pacific—Reconditioning of 300 stock cars, to be equipped with roller bearings, will permit the operation of high-speed manifest stock trains between Salt Lake City and Los Angeles, reducing the present running time of 60 hr. to 32 hr. and eliminating stopovers for water and feed at Las Vegas, Nev.

Wabash—This railroad is operating overnight freight service from Chicago to St. Louis, Mo., and between Kansas City and St. Louis, providing first-morning delivery of both carload and l.c.l. freight. Other symbol freight trains permit first-day arrivals on Chicago-Detroit and Buffalo-Detroit traffic. The switching limits of St. Louis were extended to include nearby Robertson, Mo., opening up a large industrial territory.

While net-ton mileage declined from the 1944 peak, the 1946 total of 7,319,941,109 was more than 3 billion greater than the prewar peak attained in 1929.

Have Railroad Managers Done a Good Job?

Analysis of accepted indices of efficiency shows they have; constant improvement has resulted from judicious investment and more intensive use of the plant at hand

NOBODY in the world has an innate desire to move a pound of freight, in the sense that he would like to have some apple pie or to take a trip. In short, the transportation of property is not a "final economic good." It is simply a necessary adjunct to the fulfillment of desires; it "delivers the pie."

It is true that, as the rate of economic satisfaction increases, the movement of goods increases in even greater proportion. Thus, for example, in 1900 the railroads (when they had a virtual monopoly of non-local freight haulage) chalked up a total performance of 1,860 ton-miles for each inhabitant of the country. In 1945, when they shared a large portion of the traffic with other carriers, the railroads moved 4,875 ton-miles per person—an increase of 162 per cent. To put it otherwise, while the population progressed 83 per cent, railroad freight performance jumped 381 per cent.

But nobody consciously desired that more ton-miles be moved. The greater movement resulted naturally from greater production, increased specialization (and hence longer hauls), increased competition, and the lower rates per mile and per ton which made it possible economically to widen markets and sources of materials.

From this flows naturally the corollary that, since freight transportation is not an economic good of itself, the fewer men and the less material, energy and fixed wealth that are devoted to its accomplishment—in relation to its volume—the better off we all are. For then people have more energy and wealth to devote to "final economic goods," for which they appear to exhibit an insatiable demand.

Cheap Ton-Miles Top Aim

It is otherwise with passenger movement. The more people who look upon Grand Canyon or the Smokies or bathe in the Gulf, the richer is our civilization. Society welcomes an increase in energy devoted to getting folks where they'd like to be. But, if rational, it

This is the story of the advance in the art of railroading over a period of 27 years selected for maximum comparative value. In it the best measurements of managerial efficiency are probed, unit by unit, to reveal the significant progress made in moving the freight at hand with the least equipment, men and materials. The freight train in 1946 was 42 per cent longer and 62 per cent heavier (including payload) than in 1920. Each hour on the road it produced about 150 per cent more gross product and 135 per cent more net product. The cars which composed it ran 69 per cent farther each day in 1946 than in 1920 and carried 79 per cent more ton-miles of payload. Such advances are the reason why the unit revenue received per ton per mile could decrease 7 per cent during the 27-yr. period, while prime costs sky-rocketed. Compensation per employee, for example, rose 67 per cent.

ought to deplore the contribution of a single man-hour or pound of coal or the investment of one taxpayer's or security-holder's dollar more than is necessary to produce a ton-mile of transportation.

This being so, the true measure of railroad managements' ability is not the amount of traffic they induce people to move over their properties; or the earnings they deliver to their bosses—the stockholders (although good management will certainly increase earnings, other factors permitting); or the number of jobs they create; or the amount they spend in making railroads big or modern. The true index of their real economic worth is the extent to which they move the tonnage which society itself offers to them as a whole (because it has to move it to satisfy final economic wants) with the least possible manpower, energy, equipment and fixed investment.

Where does *service* come into the scheme of things? Before World War I it was generally believed in transportation circles that service and transportation economy were incompatible.

Railroads often ran short, fast trains to meet competition, but always, it was believed, at the expense of overall efficiency. Shippers, it was thought, were simply unreasonable and were causing the country no end of added expense by their "mania" for fast freight service.

Subsequent experience and analysis have shown that service and economy are not at all opposed. For one thing, the savings to the shippers and receivers in reduced inventory, orderly flow of goods, wider distribution and the smoothing of price fluctuations by faster and more reliable service probably equal, or outweigh, the added costs of transportation incurred in producing them. In short, society as a whole comes out with a net gain. For another thing, it is not axiomatic that higher speeds, regular schedules and more intensive handling *do* increase transportation costs. For example: If the original cost of rolling stock increases at a greater rate than variable road-crew and engine costs per unit of traffic, it might pay to increase the utilization of each car or locomotive, even at a possible sacrifice of the increased crew costs entailed in the faster handling of shorter trains over the road. Or the great losses to the economy inflicted by a car shortage may far outweigh the dollars saved by a method of train operation which fails to get cars over the road.

The dilemma which exists in the relations of speed, train cost and equipment utilization is one to be solved by individual railroad management. Changing conditions necessitate varying conclusions. The optimum train length of today is not that of yesterday or of tomorrow.

Effect of Volume

The shipper's interest is in seeing to it that his demands for service on the roads as a whole do not increase the cost of transportation, the burden of which must inevitably fall upon himself. Thus, his interest in efficiency paces that of railroad managements'.

In seeking to evaluate the efficiency of railroad operation, one stumbles at the

very outset on the thorny problem of relative traffic volume. As this paper pointed out in an earlier Freight Progress Annual (May 22, 1943, page 1001), "the railroad industry is almost uniquely dependent on *volume* of business for securing low operating costs and relatively high net return on investment and capitalization." Most people are aware that fixed interest charges give relative volume of traffic potent power in the determination of net earnings. But how many know that a large portion of operating costs themselves are virtually fixed?

Since fluctuations in traffic volume are not a resultant of managerial efficiency, as the term is understood in this discussion, it is necessary, so far as is possible, to select such indices of operation and such periods for comparison as will eliminate to the greatest extent the influence of relative traffic volume offered to the railroads as a body. In short, the shipper wants to know how well the railroad manager has handled the goods given him to move—whatever the amount. Society wants to learn how railroads have added to net national wealth by doing

the "most with the least." It is clear that there are no measurements of managerial efficiency which are entirely independent of the traffic level. But there are statistical comparisons available which minimize the factor of total tonnage. If they show reasonable improvement, the efficiency of railroad management in carrying out its basic responsibility to the economy will be proved. A great railroader—James J. Hill—said that if a railroad is to increase its contribution, "Each cog in the big railroad machine, each mile of track, each engine and each car must be made to do more work."

The Complexity of Figures

Statistical measurements are maddeningly tricky and complex tools, for all of them are influenced by diverse variables, to which the analyst with a single-track mind will surely fall victim. Thus, if it were shown that the figure of "net ton-miles per train-hour" had increased, the car builder might boast that it resulted from the use of newer lightweight materials, giving more payload in relation to tare weight. The

shipper would claim it came from heavier loadings. The motive power people would point to faster and more powerful locomotives. The signal departments would cite faster road movement as a result, for example, of centralized traffic control. The car distributors would attribute the improvement to a reduction in empty car mileage through improved control of the car supply. An outsider might well see the reason in increased business activity in general or a shift toward better balance in the direction of traffic. And all or any of the appraisals could be correct, at least in part, at the same time.

The problem of the analyst is, therefore, to select those indices which will, in the main, point clearly to the degree of efficiency in expanding investment in the transportation plant and in utilizing the plant at hand. To do so, he must, first, utilize a substantial number of individual measurements in their proper relation; i.e., build up his case brick by brick. Second, he must proceed from the simple to the complex.

A primary means of minimizing the effect of traffic volume in statistical

"Net ton-miles per freight-car-day" are the final measurement of efficiency in the use of the "retail" unit of the railroad business—the car. Attainment of better performance in this sphere is the result of the joint action of the carriers, the shippers and circumstances





Intensive utilization of existing plant is a key weapon in reducing unit costs. The B. & O. yard at Lorain, Ohio, during trans-shipment season on the Lakes, is a panorama of high utilization.

measurement is that of selecting for comparison those periods which are most similar in total traffic load in relation to the contemporary railroad plant and progress in operating techniques. For this reason, the comparison to follow will contrast the experience of 1946 with that of 1920, as primary points of reference—with the further inclusion of 1929, as the top pre-World War II year in ton-mileage; 1932 as the low-point year of the depression; 1940 as the last year of peace; and 1944, as the record year of the recent war in both freight and passenger traffic volume.

Selection of the year 1920 as the chief period for comparison with the latest achievements of railroad management has the following advantages:

(1) It covers a period starting one year and one month after the cessation of hostilities, as compared with 1946, which started four months after V-J Day. (Selection of 1919 might have been more logical for strict chronology, but it would have given a year of government ownership and confusion regarding future control of the railroads. While the roads were under federal operation for three months of 1920, their future

return to private management was assured by the start of the year.)

(2) More important, 1920 saw the greatest volume of ton- and passenger-miles carried by the railroads up to that time, not even excluding the war period. In short, the railroad plant in 1920 worked as near its capacity, as measured by operating methods thus far evolved, as the railroads worked in 1946. Thus, the influence of relative traffic volume is minimized in any comparison of the two years.

(3) At the close of 1920, virtually all of the \$5,616 millions of added net investment which the railroads placed in their plant in the Twenties, and which constituted the "fat" on which many of their achievements in handling World War II traffic were based, were yet to be made.

(4) Further, between 1900 and the start of World War I, due to political antagonism toward the carriers, new facilities installed by the roads had failed to keep pace with business, and both prior to and during that war car shortages were severe. Hence, by comparing 1946 with 1920, it is possible to analyze the total effect of the important plant investment of the railroads made during the Twenties, when they were permitted to attain reasonable net (though not legally maximum) earnings with which to finance the improvements.

Comparisons in terms of dollars reflect many variables which are outside the control of management. The late L. F.

Loree was opposed to their inordinate popularity as measurements of efficiency because, as he pointed out, "fluctuating changes in rates of pay and prices of materials invalidate comparisons, while constancy inheres in man-hours, tons, ton-miles and engine- and car-miles."

For this reason, measurements by physical, as distinct from financial, units are to be preferred. Comparisons in terms of dollars will here be withheld for use in their proper sphere—that is, to show whether management, by the efficiency it achieves as measured by physical units, is able to absorb the dollar increases in cost within a framework of relatively static unit charges to shippers.

The Work Performed

To evaluate the accomplishments of railroad management over the 27-yr. period 1920-1946, the raw statistics of the work done are an elementary requirement. The "retail" unit of railroad freight service is the ton-mile, the simple product of *Quantity* \times *Distance*; i.e., "tons of freight originated" \times "average haul per ton."

Tons of Revenue Freight Originated (All Roads)*

Year	Tons (000's)	Per cent above or below 1920
1920	1,362,999	
1929	1,419,383	+ 4.1
1932	678,854	-60.2
1940	1,069,045	-21.6
1944	1,491,233	+ 9.4
1945†	1,424,913	+ 4.5

* While most of the data set forth hereinafter excludes terminal, switching and Class II and III railroads, it is necessary to include all roads in tons originated, because a sizeable proportion of railroad tonnage is produced on the short lines but moves for the most part over the Class I roads. If the figure is limited to Class I roads, average length of haul will be overstated because the tons originated by the Class II and III roads will be eliminated, while the ton-miles will include those made on Class I carriers, wherever originated.

† Data for 1946 not yet available. Data for 1945 excludes Class II and III roads.

Revenue tons originated attained a pre-World War II peak in 1926, and in 1932 plummeted to the lowest level since 1902. Due to the loss of short-haul traffic to competing forms of carriage, the railroads now normally enjoy substantially less tonnage in relation to

Average Haul Per Ton Originated (All Roads)

Year	Miles	Per cent above 1920
1920	303.52	
1929	317.17	+ 4.4
1932	346.63	+14.2
1940	351.13	+15.6
1944	473.28	+55.9
1945*	477.90	+57.4

* 1946 data not available. 1945 figures exclude Class II and III roads.

the total freight business of the country than in 1920. But the average length of haul per ton originated has shown a steady increase over the period under discussion, so that the railroads now perform a greater total transportation service with fewer tons offered for transportation.

As a result of the two opposite influences, the total service of the railroads has tended toward a steady growth in "good times" and has dropped less sharply during depression than tons originated would indicate. Long "emergency" freight hauls during World War II further intensified the influence of length of haul to produce phenomenal records in total "retail product" of the railroads.

Revenue Ton-Miles Hauled (All Roads)		
Year	Ton-Miles (000's)	Per cent above or below 1920
1920.....	409,994,739	
1929.....	447,111,797	+ 9.0
1932.....	234,364,393	-42.9
1940.....	373,225,181	- 9.0
1944.....	736,826,301	+79.7
1946.....	591,954,432	+44.3

Train Load the Prime Unit

But while railroads "sell" ton-miles, they "manufacture" train-miles, to quote Jim Hill once again. The ton-mile is not a unit of the transportation work of the railroad as far as cost is concerned, because the energy necessary for its production is not constant. Therefore, to study the efficiency gains of the 27-yr. period, it is necessary to replace the unit of "Quantity \times Distance" with that of "Vehicle \times Distance."

In railroading the vehicle is the train—not the car. The car-mile cannot be a useful unit of service because the number of cars to a train may vary considerably without any variation in the direct operating cost of the work done. "The quantity of energy spent per car-mile does not tend to constancy, while the quantity of energy spent per train-mile *does* tend to constancy."¹

In fact, the efficiency of a railroad management depends to a very great extent on the attainment of the optimum train length—i.e., the most effective compromise between speed and tonnage. It is obvious that the most important factor in determining the physical cost of moving a ton of freight one mile is the relation between total ton-miles and the number of train-miles run—in short, the "revenue tons per freight train." The late Thomas F. Woodlock, Interstate Commerce Commissioner and distinguished student of railroad economics, looked upon the freight train load as,

"beyond any single factor, the touchstone of successful or economical railroading."

Put otherwise, the operation of a locomotive and cars acts as the greatest single factor in the determination of the variable costs of performing business. If the ton-miles executed for each train-mile are not the greatest possible, irrevocable wastage has been committed. To quote Woodlock: "In general it may be said that no money is wasted by the railroads in manufacturing train-mileage. The waste is in the use of train-miles once they have been manufactured."

Measuring the Train

To work again from the primitive to the complex, there should first be set down the actual train-miles operated (i.e., number of "railroad vehicles" \times "miles run").

It is noteworthy that, over the comparative period, train-miles—the principal expense unit of railroad operation

Train-Miles (Freight)		
Year	Miles (000's)	Per cent above or below 1920
1920.....	634,201	
1929.....	612,170	- 3.5
1932.....	390,839	-38.4
1940.....	482,175	-24.0
1944.....	698,564	+10.1
1946.....	590,687	- 6.9

—have declined, even in the face of higher traffic levels, except for the exceptionally heavy year of 1944 (and here, the number of fast special freight and mixed trains operated for the armed services probably influenced train-mileage adversely). In 1946, when ton-miles were 44 per cent greater than in 1920, train-miles were down almost 7 per cent.

Inquiry then advances to the number of cars per freight train, as an index of management's ability to obtain the most vehicle capacity (which may or may not be fully utilized, due to other factors) from each locomotive and crew sent out on the road.



Wages are a prime cost. The average hourly compensation of railroad employees increased 67 per cent between 1920 and 1946

¹Woodlock, Thomas F., *Anatomy of a Railroad Report*.

Cars Per Freight Train		
Year	No. cars	Per cent above 1920
1920	36.6	
1929	48.6	+32.7
1932	44.8*	+22.4
1940	49.7	+35.7
1944	53.0	+44.8
1946	51.8	+41.5

* Caboose included for a portion of the year.

The record shows that freight trains have been growing progressively longer, with certain recessions due to lower traffic levels but not in proportion therewith. In 1932, when ton-miles were 42.9 per cent below 1920, the number of cars per train was up 22 per cent.

To refine the analysis further, it is necessary to look at the total weight of the train (exclusive of the locomotive and tender), including that of the rolling stock and its lading. This figure measures the actual physical work which the locomotive performs. An increase in this ratio will indicate the operation of longer and heavier trains, through heavier power or better grades of improved classification. The anatomy of the typical American freight train has shown a steady growth in bulk (with a slight diminution since World War II) during the past 27 years, and was 62.3 per cent heavier in 1946 than it was in 1920.

Gross Tons per Train*		
Year	Tons	Per cent above 1920
1920	1,443	
1929	1,865	+29.2
1932	1,682	+16.5
1940	2,047	+41.8
1944	2,410	+67.0
1946	2,343	+62.3

* Excluding locomotive and tender.

But the dragging of rolling stock from point to point produces in itself no useful transportation. The public is interested, not in the increase in gross load of the typical freight train but in its pay load. Although expenses vary according to the gross tons hauled, revenue follows the net load.

The influences in the ratio of pay, to gross, load are several. An important consideration is the number of empty, compared with loaded, cars. As W. J. Cunningham, professor of transportation, Harvard Graduate School of Business, has pointed out, "The unit resistance—per ton—of an empty car is approximately twice as great as that of a car loaded to its weight capacity. A locomotive on a given run may be able to haul 3,000 gross-tons in fully loaded coal cars, yet be unable to haul more than 2,400 gross-tons of empty cars."

The reduction of empty car movement runs against obstacles over which management has little control. Direction of traffic on most roads is unbalanced by virtue of the location of markets and producing areas. Individual roads may, like the Great Northern in its early days, by low, or marginal, rates, encourage traffic to help balance the flow. But the possibilities in this direction are limited. (How the lever of traffic balance can boost operating efficiency was amply demonstrated during the war on roads like the Denver & Rio Grande Western, on which, from a preponderance of eastward tonnage, the flow changed to an almost equal flow in each direction, with a slight advantage in the westward, or normally slack, direction.)

Management can, however, reduce empty mileage by careful distribution of cars, utilizing incoming equipment for outbound loads wherever possible. The virtual suspension of car service rules the last few years has aided in this endeavor substantially, by permitting the loading of available empties almost without regard to home-routing regulations.

Per Cent Loaded of Total Car Miles	
Year	Per cent
1920	67.9
1929	62.8
1932	60.7
1940	61.8
1944	65.7
1946	67.0

In addition to the relative proportion of empty to loaded cars, the ratio of pay, to gross, load is greatly influenced by the car load, which, in turn, is affected by the proportions of low-grade and high-grade freight, respectively. The former moves chiefly in full carloads; the latter frequently moves in relatively light loads.

Over the innate density of freight, railroad management has no control. But it can, and does, seek to increase the average load per car by the very obvious device of placing in service cars which provide the greatest cubical or weight capacity in relation to tare weight, when line clearances, cost, and the availability of materials are taken into consideration.

The number of cars owned by the railroads has declined substantially during the period of comparison.

Freight Cars Owned (Class I roads only)		
Year	No. cars	Per cent below 1920
1920	2,359,962	
1929	2,289,108	— 3.1
1932	2,175,827	— 7.8
1940	1,660,850	—29.6
1944	1,770,098	—25.0
1946	1,758,368	—25.5

The railroads had more than one-fourth fewer cars in 1946 than in 1920, yet performed with this reduced fleet 44 per cent more ton-miles.

Keeping Cars in Repair

In time of heavy traffic, it is obviously efficient for the railroads to so speed up the rate of repair that the maximum number of cars on line are available for hauling goods.

In spite of shortages of labor and materials, they did a good job in this respect during World War II and the adjustment period following.

Per Cent Unserviceable of Total Cars on Line	
Year	Av. per cent per month
1920	7.0
1929	6.0
1932	10.6
1940	7.9
1944	2.5
1946	4.0

This improvement in the ratio of serviceable cars compensated somewhat for the reduction in number owned.

Of even greater importance, the average capacity of the cars—in tons—increased 20.5 per cent between 1920 and 1945.

Average Capacity of Freight Cars (Tons)		
Year	Tons	Per cent above 1920
1920	42.4	
1929	46.3	+ 9.2
1932	47.0	+10.8
1940	50.0	+17.9
1944	50.8	+19.8
1945*	51.1	+20.5

* Data for 1946 not available.

This increase in the carrying capacity of the individual cars did much to outweigh the effects of the drastic cut in their numbers, as is demonstrated by a comparison of aggregate freight car capacity during the period.

Aggregate Capacity of Freight Cars (Tons)		
Year	Tons (000's)	Per cent above or below 1920
1920	98,343	
1929	105,411	+ 7.2
1932	100,901	+ 2.6
1940	82,722	—15.9
1944	89,960	— 8.6
1945	89,971	— 8.6

In short, while the number of cars in 1945 was 25 per cent less than in 1920, their aggregate capacity was only 8.6 per cent less.

A further factor in average pay load is the efficiency of management in boosting the load of merchandise and way cars of less-carload freight. The latter

is inherently light-loading, and gains in pay load "come hard." But they have been won by the substitution of truck service for light-loaded and inefficient local way cars; improvements in l.c.l. distribution by increasing the number of through-loaded, or "overhead," merchandise cars, both intra- and inter-system; and careful placement of transfer stations.

Of course, here, as in so many phases of railroading, there exists the dilemma of "time versus load." In certain instances, the elimination of transfers resulted in lighter loads per car, even though the service to the shipper was greatly improved. But the effects of faster transit time are far-reaching in terms of physical units themselves, and may actually increase the railroad plant—especially in time of car shortage—by compensating loss of load with gain in equipment utilization.

Since May, 1942, the railroads have cut their cloth to fit General Order No. 1 of the Office of Defense Transportation, setting a minimum loading of ten tons for merchandise cars. Also, during the war, a number of railroads paired off their service so that each moved merchandise cars between common points on alternate days, thereby providing daily service without wastage of capacity. Schemes of this nature were far more considerate of shippers' needs than the "sailing day" plans initiated by the U. S. Railroad Administration in World War I.

Other ways by which management has sought to increase "pay load" are by means of rates—particularly commodity—which are based on high potential minimum loadings per car. To obtain the benefits of such rates, shippers must take the best advantage of the physical possibilities of the freight car. On its part, the carrier must provide the type car which can encompass the minimum or offered load, or provide additional cars in lieu.

In the latter case, the load is spread and produces light loadings per car. Hence, the provision of cars of the sizes ordered is a necessary ingredient in high pay loads.

How well outside factors, plus managerial efficiency and shipper response to high loading incentives (heavy loading minima were made mandatory in May 1942)² have succeeded in producing increases in pay loads per car, is illustrated by the 27-yr. record of "net tons per loaded car."

²O.D.T. minimum loading orders may have affected net carloads favorably:

Net Tons Per Loaded Car		
Year	Tons	Per cent above 1941
1941.....	28.5	.....
1942.....	31.8	+11.5
1943.....	33.3	+16.8
1944.....	32.7	+14.7
1945.....	32.2	+12.9
1946.....	31.3	+ 9.8

Net Tons Per Loaded Car		
Year	Tons	Per cent above or below 1920
1920.....	29.3	.....
1929.....	26.9	- 8.2
1932.....	24.9	-15.1
1940.....	27.6	- 5.9
1944.....	32.7	+11.6
1946.....	31.3	+ 6.8

The Factor of Speed

Of far more direct interest to the railroads' customers than the statistics of load with which we have been concerned exclusively thus far, is the datum of time. It has been demonstrated that the shipper does gain in the long run from improvements in load performance. But his interest in speed needs no demonstration; his direct concern therewith is evident in the criterion he follows in choosing among competing railroads and among forms of transportation.

The element of overall speed is not just a device to attract business. It is a legitimate and fundamental measure of work performed; a most significant influence in utilization of plant and an essential element in any measurement of relative efficiency. The factor of speed in railroad operating statistics was made important for the first time in the uniform indices of efficiency introduced by the U. S. Railroad Administration for the purpose of controlling the relative performances of the various regions and individual road groups thereunder. W. J. Cunningham, who spear-headed this important advance in analysis of railroad management, wrote in 1917 that, although relatively few operating officers had then become accustomed to thinking in terms of "ton-miles per train-hour," the latter index was a better measure of efficiency than straight load units. He asserted: "Ton-miles per train hour are the resultant of load and speed. They are analogous to the horsepower unit."

The speed of trains not only affects the service rendered to the public, but as well the utilization of rolling stock and roadway. Students of transportation have come more and more to recognize that rapid turn-around of freight cars may accomplish more in utilizing them than increasing the average load; that an increase in the speed of trains may prove profitable by getting more work out of available motive power. As has been pointed out, the job of management is to balance the effects of speed and the effects of load and determine the optimum combination of the two with relation to service, cost and equipment utilization.

To quote Prof. Cunningham: "There is always a critical point between the two extremes which, under normal conditions, will produce the maximum of ton-miles per train-hour at the minimum cost per ton-mile."

The average speed of freight trains has shown a substantial increase in the interval between 1920 and 1946, although the increase has been by no means steady, and there have been regressions. Trains moved 55 per cent faster in 1946 than in 1920.

Average Speed of Freight Trains

Year	M.P.H.	Per cent above 1920
1920.....	10.3	.....
1929.....	13.2	+28.1
1932.....	15.5	+50.4
1940.....	16.7	+62.1
1944.....	15.7	+52.4
1946.....	16.0	+55.3

The ratio of the combined weight of rolling stock and its load to each hour the freight train is on the road between terminals is of significance in showing the actual work performed by the basic unit of railroad transportation—the train. When it shows improvement, it gives clear indication that management is moving more goods faster, without increasing the fundamental cost basis of the production.

Gross Ton-Miles per Freight-Train-Hour*

Year	Ton-Miles	Per cent above 1920
1920.....	14,878	.....
1929.....	24,539	+ 64.9
1932.....	26,046	+ 75.0
1940.....	33,811	+127.2
1944.....	37,298	+150.6
1946.....	37,071	+149.1

* Excluding locomotive and tender.

Efficiency measured by this statistical unit showed a more than 150 per cent improvement in 1944 over 1920 (both years being record traffic years compared with their predecessors). Postwar year 1946 showed but a slight falling off. To have moved 1946's traffic at 1946's overall speed in 1920 would have required 2½ times the number of trains actually run in 1946. Better plant, higher shipper cooperation and increased managerial efficiency made the difference.

The Final Measure of the Train

Inquiry now proceeds to the relation of net, or pay load, to the time factor. As thus computed the figure of "net ton-miles per train-hour" provides the refined, inclusive and final measure of the "value work" performed by the average freight train. *It is probably the most valuable single index of the progress in railroad plant and technique.* In it are represented the separate contributions of bigger and faster locomotives, bigger and lighter cars, heavier car loading, higher speeds, longer trains, reduced grades and curvature, "keep-the-trains-moving" signaling and tracking, and other factors.

As can be seen in the comparative table, this significant ratio has exhibited a singular improvement over the 27-yr. period under discussion.

tent by the speed of the trains in which it is moved, and to a great extent by such factors as concentration for future loading (as in the grain-producing

"Net ton-miles per freight-car-day" is, as Prof. Cunningham has pointed out, "the final and inclusive unit of freight car efficiency."⁸ This unit is the resultant of three factors:

- (1) average ton-miles per loaded car-mile
- (2) per cent of loaded car-miles to total car-miles
- (3) average car-miles per car-day

It is a particularly valuable measure of transportation efficiency because "an improvement in any one factor favorably influences the inclusive unit; a loss in any one factor adversely affects it."

As has been pointed out, the performance of individual cars is far more affected by outside conditions and by the activities of the railroads' customers than is the performance of trains. It is noteworthy that while "net ton-miles per car-day" increased 78.5 per cent in 1946 compared with 1920, the final measure of train performance—"net ton-miles per freight-train-hour"—showed an improvement of 135 per cent over the same period.

It might be pointed out also that, while in 1946 the freight car index of efficiency dropped precipitously from the 1944 figure, the index of train performance fell only moderately between the same years.



Powerful and efficient motive power means more "retail" product per train-mile. This is an example on the Union Pacific

Net Ton-Miles Per Freight-Train-Hour		
Year	Ton-Miles	Per cent above 1920
1920	7,303	
1929	10,580	+ 44.8
1932	10,264	+ 40.5
1940	14,028	+ 92.0
1944	17,623	+141.3
1946	17,181	+135.2

Car Time—Load Data

As with the train unit, the factor of time is exceedingly important in measuring the performance of the car, which, as has been pointed out, is the "retail" production unit of the railroads and the element of their plant with which shippers are most concerned.

But, unlike the train (which exists only from terminal to terminal, so that its time factor is influenced exclusively by speed and intermediate delays) the individual car leads a number of distinct "lives":

- (1) in trains
- (2) in yards
- (3) in the hands of shippers or freight houses
- (4) waiting for a change of status
- (5) in repair
- (6) in storage ("ancient history" since 1939)

Thus its productivity, in terms of time, is influenced to only a limited ex-

areas); intermediate yarding; loading and unloading; use for storage; diversion and reconsignment; and closed plants on Saturdays and Sundays.

The ability of railroad management to improve the time-performance of the freight car is limited by these outside influences. Nevertheless, the record over the 27-yr. period is good in this regard.

Car-Miles per Car-Day		
Year	Miles	Per cent above or below 1920
1920	25.1	
1929	32.3	+28.6
1932	19.8	-21.2
1940	35.0	+39.4
1944	49.3	+96.4
1946	42.4	+68.9

This improvement, plus the already demonstrated increase in the pay load of the car, has produced a remarkable progress in the index of the work performed by the freight car.

Net Ton-Miles Hauled Per Freight-Car-Day		
Year	Ton-miles	Per cent above or below 1920
1920	498	
1929	547	+ 9.8
1932	299	-40.0
1940	598	+ 20.0
1944	1058	+112.4
1946	889	+ 78.5

Fixed Plant

The mileage of railroad operated in freight service declined 2.7 per cent from 1920 to 1946. But the investment in that mileage increased from \$20 billions in 1920 to \$26 billions in 1944, or 30 per cent. "Net ton-miles per mile of road per day" is considered to be the measure of the use to which fixed plant is put. James J. Hill asserted that this unit—which measures density of traffic—analyzes "the actual business use of the rails, which is the unit of efficient work."

Net Ton-Miles Per Day Per Mile of Road Operated		
Year	Ton-miles	Per cent above or below 1920
1920	5,280	
1929	5,627	+ 6.6
1932	2,947	-44.2
1940	4,792	- 9.3
1944	9,446	+78.9
1946	7,655	+44.9

While the train is the wholesale, and the car, the retail, product of railroad-ing, the chief tool of the trade is the locomotive, and a great measure of the efficiency already observed in train and

⁸ Cunningham, W. J., *Annals of the American Academy of Political and Social Science*, Philadelphia, Nov., 1919, Publication No. 1342. Reprinted in White, J. L., *Analysis of Railroad Operations*, New York, 1925, 1946.



Maximum productive use of rolling stock is a part of the railroads' answer to higher prime costs outside management's control. A mobile servicing unit cuts "dead head" time and mileage

car data is due to management's increase in skill in powering its trains.

The number of locomotives assigned to road freight service on the railroads has declined almost steadily since 1920.

No. of Freight Locomotives on Line (All Roads)

Year	No.	Per cent below 1920
1920	30,109	.....
1929	29,149	— 3.1
1932	27,865	— 8.0
1940	22,238	—35.3
1944	22,315	—34.9
1946	22,033	—36.7

But the aggregate tractive effort of all types of locomotives in service (freight, passenger and switching) decreased only slightly from 2,340,761,196 lb. in 1920 to 2,314,354,113 lb. in 1944, or 1.2 per cent.

The utilization of locomotives in mileage alone has shown a vast improvement over the comparative period.

Locomotive-Miles Per Locomotive-Day (Freight, Class I Roads)

Year	Miles	Per cent above or below 1920
1920	62.5	.....
1929	65.1	+ 4.1
1932	42.2	—32.5
1940	72.5	+16.0
1944	105.3	+68.4
1946	90.2	+44.3

One of the most significant measurements in the mechanical efficiency of the locomotive is the improvement in coal consumption (equated for oil-burners and Diesels) with relation to the job performed.

The hourly pay of railroad employees

Lb. Coal Per 1000 Gross Ton-Miles

Year	Lb.	Per cent below 1920
1920	174	.....
1929	125	—28.2
1932	123	—29.4
1940	112	—35.7
1944	115	—34.0

increased 67.1 per cent between 1920 and 1946. To off-set this expense trend, the railroads succeeded remarkably well in increasing the work performed per employee by judicious improvement in plant and operating practices. They accomplished this record in spite of rigid minimum-crew and the relentless "make-work" pressures of the labor organizations.

Ton-Miles Per Employee*

Year	Ton-miles	Per cent above 1920
1920	199,608	.....
1929	265,030	+ 32.7
1932	223,417	+ 11.9
1940	352,432	+ 76.5
1944	505,715	+153.3
1946	421,920	+111.3

* Since a division of employees engaged in freight service only, those in passenger only and those common to both is impossible, analysts frequently equate traffic units (ton-miles and passenger-miles) for the ratio. This device is disregarded in this instance because the freight product is being studied separately. It is believed that the proportion of employees incident only to passenger operations has not changed sufficiently between 1920 and 1946 to affect the comparison.

Combining the influences of greater efficiency and higher pay for the same hourly service, we get the end-product of ton-miles per dollar of compensation.

The statistical comparisons which have been set forth in turn indicate the reason why the railroads have been able

Ton-Miles Per Dollar of Compensation

Year	Ton miles	Per cent above 1920
1920	113	.....
1929	152	+34.5
1932	152	+34.5
1940	184	+62.8
1944	185	+63.7
1946	143	+26.4

to provide greatly improved freight service, at a lower unit revenue, in 1946, compared with 1920, in the face of such tremendous increases in prime costs as a 67 per cent in the average hourly wage of employees.

Revenue Per Ton-Mile

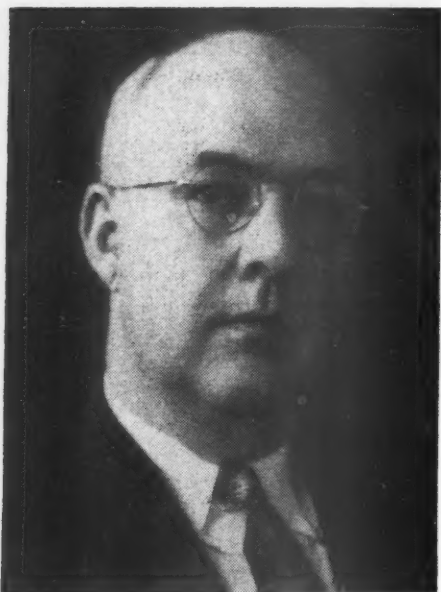
Year	Amount (cents)	Per cent above or below 1920
1920	1.052	.....
1929	1.077	+ 2.3
1932	1.045	— 0.7
1940	0.946	—10.1
1944	0.950	— 9.7
1946	0.978	— 7.1

An improvement in railroad efficiency is not as easily won as cost-reduction in manufacturing. Transportation is a perishable commodity which cannot be stored. The roads must operate regularly, whatever the traffic offered. A minimum frequency of service is owed the public. Hence, advances in their technology and administration cannot always be carried out to their logical conclusion, as in an automobile assembly line plant, for example.

Nevertheless, the progress made by the railroads in producing more freight transportation with less to do it with remains as one of the notable feats of our day. Had it not been accomplished increase in prime costs would have pushed freight charges beyond the horizon.



All Maine Central freight cars will carry the insignia of the "Pine Tree State"



The Author

Is Today's Rate Structure Adequate?

Rates must be adapted to changes in the economy or both carriers and their patrons will suffer—a fresh inquiry into existing pricing, without undue worship of formulas and precedent, might prove profitable

WITH the country's economic geography having changed considerably as a result of the war, there arises a question of importance to carriers and their patrons alike, namely: are present freight rates, rate relationships, and methods of rate-making sufficiently attuned to the economic changes which have occurred to assure the best possible results for all concerned—for shippers, for carriers, and for the consuming public?

Just for example, it is conceivable that rates could be made which would lay so much emphasis on avoiding even a reasonable degree of discrimination that they would attain perfection in that regard, to the very slight benefit of the protected interests, at the expense of an entirely disproportionate injury to the traffic as a whole. Or some other desirable quality in a rate—ease of calculation, for instance, or a neat mathematical formula for obtaining precision in rate relationships—might be overemphasized to the detriment of other factors which are considerably more important to shippers, carriers, and consumers than mere ease of comprehension and convenience in calculation.

Rates Must Move the Goods

Economic changes are constantly occurring which call for conformable changes in the pattern of rates, but, a period of economic upheaval such as the past seven years demands more than ordinary critical attention to the rate structure, lest the adaptation of rates to the economic changes which have occurred lag unduly behind the facts, to the detriment of everybody.

Shippers and consignees seek, primarily, rates which will give effective

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access to raw materials at acceptable delivered prices, and which will permit finished products to meet competition in customary or expanding markets at prices which will yield a profit. Such is the initial concern of the shipper with freight rates. In the long run, however, his interest in rates is the same as that of the carrier: That is, he wants the rates to be sufficiently remunerative to the carrier to induce the continued new investment in transportation service, failing which the quality, quantity, and economy of available transportation will inevitably, though perhaps slowly, deteriorate.

Freight rate-making is an art. Rates are arrived at by competitive bargaining to a far greater degree than is generally recognized. The technique of bargaining, of course, has become more sophisticated than the traditional chaffering in which buyers and sellers haggle until each has got what he considers the utmost concession he can wheedle out of the other party; and, in addition, regulatory authority sets limits within which the competitive forces are permitted to operate. Carriers need traffic volume and would not extort piratical rates even if there were no regulation, if such rates would seriously threaten traffic volume. Conversely, if certain rates appear to them not to be compensatory, while they are not permitted to refuse the traffic, they can at least refrain from bidding for it and can concentrate their service efforts on traffic

deemed more profitable. Shippers and consignees carry with them to the market the necessity to retain their competitive positions or the urge to obtain a competitive advantage. If they cannot find rates to meet their demands from one carrier or type of carriers, they may exercise their privilege of seeking such rates from other transportation agencies.

Neither shippers nor carriers—even leaving the regulatory authority out of account—have complete freedom in their bargaining for rates, because neither party is in a position to forego what the other has to offer. Their position is not greatly different from bargainers in other fields of business, because neither buyers nor sellers are able for long periods to dominate market prices.

Government Responsibility

In interstate commerce, the government asserts its authority over freight rates in two ways: first, in regulating the general rate level; and second, in the regulation of particular rates within this general pattern, so as to prevent unjust and unreasonable discrimination, preference or prejudice.

The broad policy of rate regulation is stated in the "Rule of Rate-Making" of the Interstate Commerce Act. This rule, as it now stands, after having been added to the Act by the Transportation Act, 1920, and amended by the Emergency Railroad Transportation Act, 1933, and the Wheeler-Lea Act, 1940, provides that the Interstate Commerce Commission in prescribing "just and reasonable rates . . . shall give due consideration, among other factors . . . to the effect of rates upon the movement of traffic by the carrier or carriers for

which the rates are prescribed; to the need, in the public interest of adequate and efficient transportation service at the lowest cost consistent with the furnishing of such service; and to the need of revenues sufficient to enable the carriers, under honest, economical and efficient management to provide such service." ¹

Rate Factors

In establishing rates according to the prescription laid down in the law, consideration must be given to several sets of factors:

(1) Value—including intrinsic value; the value added by the transportation service, the stage of manufacture of the article, whether a raw material, a semi-finished product, or a finished article; the inherent qualities of the article; the distance it must be transported; the local, sectional or national characteristics of the market for the goods; competition between the goods and other goods; and "what the traffic will bear" or "rates which will move the traffic."

(2) Cost of performing the service, including the "out-of-pocket" cost; the joint costs incurred in operations which simultaneously perform a number of transport services; the effects upon unit costs of transporting larger or smaller volumes of traffic; the direct operating expenses; traffic and solicitation expenses; and full share of cost, including operating and fixed charges or costs, supervision, and administration.

(3) Finally, such factors as the development of sections of the country or of industries, the relief of those who are stricken by disaster, or the presence of national emergencies such as war.

Government regulation as a rate-making factor includes supervision of the technical aspects of rate-making and tariff publication as well as the broader matters of rate policy in which the government functions to protect the public interest in freight rate-making. It should not be overlooked that the public interest includes not alone the desire of shippers, consignees, and consumers to secure transportation service at a modest price, but embraces also a reasonable regard for the legitimate self-interest of carriers of all types, of those whose capital is invested in transportation enterprises, of those who are employed in transportation, of the management of these enterprises, and of the people of the country generally as voters and taxpayers.

From time to time general or horizontal changes have been made in freight rates in response to the revenue needs of the carriers or the general re-

quirements of industry. These general rate or revenue cases before the Interstate Commerce Commission and state regulatory commissions have been instituted in the hope of increasing revenues to the levels considered necessary to enable the carriers to meet their expenses of operation and other costs, with the volume of traffic estimated to be available at the rates proposed to be established.

During the past thirty years there have been eight major general railroad, domestic water-carrier and motor-carrier freight rate or revenue cases. These major railroad freight rate changes include General Order No. 28, United States Railroad Administration, 1918; Ex Parte No. 74, *Increased Rates*, 1920; I. C. C. Docket No. 13293, *Reduced Rates*, 1922; Ex Parte No. 103, *Fifteen Percent Case*, 1931; Ex Parte No. 115, *Emergency Charges*, 1935; Ex Parte No. 123, *Fifteen Percent Case*, 1937-1938; Ex Parte No. 148, *Increased Railway Rates, Fares and Charges*, 1942; and Ex Parte No. 162, *Increased Railway Rates, Fares and Charges*, 1946.

In these general rate or revenue cases the Interstate Commerce Commission has tended to rely largely upon the percentage method of increasing freight rates rather than upon specific increases in cents per 100 lb. or per ton. Special treatment has been given to certain commodities, chiefly agricultural products, either by lower percentage increases or by increases in specific amounts per unit of traffic.

These general freight rate increases cannot be said to have produced results satisfactory, generally speaking, either to the carriers or to the shippers and consignees. The average revenue of Class I railroads per ton-mile has not reflected these increases. Railroad earnings, all Class I railroads considered as a unit, have not been satisfactory over the past quarter century, excepting for two or three of the very best years of the 1920's and the brief period of World War II. The increases in rates have contributed to the diversion of traffic from one type of carrier to another, and have given incentives for the ownership and operation of transportation facilities by industries themselves.

The average revenue per ton-mile received by Class I railroads for representative years between 1918 and 1945, the latest year for which the data have been published, has been as follows:

Year	Mills Per Ton-Mile
1918.....	8.490
1921.....	12.750
1926.....	10.81
1932.....	10.46
1934.....	9.78
1938.....	9.83
1942.....	9.32
1943.....	9.33
1944.....	9.49
1945.....	9.60

In 1946 the average revenue of one

large trunk line was 9.72 mills per ton-mile, an increase of .24 mills over its average figure in 1945.

Percentage rather than specific increases in freight rates are distasteful to many shippers and consignees for a variety of reasons. They tend to disrupt rate relationships between industries, communities, and commodities, many of which have been carefully worked out in section or commodity rate cases. They tend, particularly, to harm industries the freight rates of which are based upon ability to bear transportation charges rather than upon cost of service. They have the effect of widening the spreads between long-haul and short-haul rates and to restrict the areas from which raw materials and supplies can be drawn, and to limit the markets in which goods can be marketed. Percentage freight rate increase also tends to impede the development of a large-scale interrelated economic structure in which goods which can be produced or manufactured under conditions of concentrated production in one area are distributed nationally, while other goods which can be produced most efficiently in several or a number of parts of the country and distributed within these areas are each given appropriate interrelated freight rates.

Figuring Results of Raises

The evidence is that not all transportation costs, including terminal and line-haul factors, increase with distance or in proportion to distance. The revenue requirements of the carriers should be equitably distributed among various types of traffic, according to a plan which will preserve and not disrupt reasonable rate relationships established by a consideration of the requirements of commodities, industries and markets, rather than by a percentage increase upon all or virtually all freight rates, disrupting these relationships.

There is nothing more "scientific" about increasing rates by percentage than by specific amount per ton or per 100 lb. or other unit of shipment. It is merely a convenient method of distributing revenue requirements over existing freight movements.

There is a fallacy in the usual calculations supporting to show that the percentage plan will produce the required revenue, because rate changes cause differences in the volume of traffic, in the areas and markets between which the traffic moves, and in the carriers which transport it. To the extent that the demand for transportation services is elastic, there are changes in traffic movements corresponding to the alteration of rate relationships.

The commission has recognized the deficiencies of the percentage method of

¹Interstate Commerce Act, Part I, Section 15-A (2); Part II, Section 216 (i); Section 307 (f); and Part IV, Section 406 (d).

freight rate increases and has expressed its views in many cases, either in majority opinions or in minority dissenting opinions. The percentage method continues to be used, however, the commission justifying the practice on the grounds of expediency; directing the carriers to make appropriate individual adjustments found to be required to restore or establish equitable rate relationships.

In *Ex Parte No. 74—Increased Rates, 1920*, the majority report of the commission, after discussing the desirability of preserving fixed rate relationships when they are found to exist, stated, in part:

"In favor of maintaining differentials, (or fixed competitive rate relationships), it is said that they have been fixed in most cases after careful investigation, and that they represent the proper measure of difference in the rates; that often they represent the maximum differences which will permit more distant shippers to compete with those in close proximity; that to increase rates by a percentage tends to decrease the radius in which goods are marketed; and that in all cases the margin of profit has not increased proportionately to prices."²

The defect of increasing rates by percentages and relying upon subsequent readjustments to restore competitive or establish proper relationships is that the adjustments are frequently still undetermined when the next general rate change comes along.

Distance Class Rates

In the establishment of freight rate structures for major traffic territories, reliance has been placed generally upon rates made upon distance or "mileage blocks"; on fixed relationships of all classes to first class; commodity rates based upon column percentages of first class; with distances computed via shortest routes between which there are physical facilities for the interchange of traffic. Exceptions are made by the establishment of "key" rate points to preserve some or all of existing competitive rate relationships and by the establishment of rates via weak carriers, or to or from branch line points, or, in areas of light traffic density and high operating expenses per unit of traffic, by adding "arbitraries" to the master mileage scales. These patterns unquestionably have the virtue of greater consistency and ease of understanding, but they often fail to provide rates which preserve competitive relationships and develop traffic.

There appears to be no sound reason for the relationship of commodity rates to class rates, except that of convenience in statement, and no better reasons for the relationship of carload rates to l.c.l. rates. The fact that only about 5 per

² (58 I.C.C. 220, 244-245), 1920.

cent of the total traffic moves at class rates, about 10 per cent at exceptions to the classification, and 85 per cent at commodity rates, seems to point to the conclusion that the whole freight rate structure should not be balanced upon the small class-rate apex; and that the whole structure should not be related to rates which are used only when no others are available. Classification and class rates are necessary — for l.c.l. or less-than-truckload traffic, for high-grade merchandise, and as "residual rates" (available in the absence of other rates) but more realistic and effective pricing appears to be required to develop traffic for the carriers and to meet the needs of industry.

New Departures

Because of dissatisfaction with the more conventional methods and patterns of freight rate-making, carriers and shippers in Great Britain, Canada and the United States in recent years have turned to freight rates made upon different bases and designs.

Among the most spectacular of these innovations are the "agreed charges" made by the railways of Great Britain. This plan of freight rate-making was inaugurated in 1934 following the passage of enabling provisions of the Road and Rail Traffic Act, 1933. These charges are made by agreement between the railways and their patrons, under which an average unit rate or charge is established on all of the traffic of a given customer; or on all of his traffic shipped by rail; or on any specified part of his traffic. Careful studies are made of the cost of performing the service by rail and of the comparable cost by alternative means of transport. Agreements may then be offered based upon a charge per ton or other unit of weight, per shipment, per package, a percentage of the invoice price of the goods, or a fixed amount to cover all shipments over a period of time.

The agreements are subject to the supervision of the Railway Rates Tribunal which may approve or disapprove the arrangement, after giving public notice of the proposed agreements and affording to other shippers or parties affected the right to object to them or to seek similar arrangements for themselves. Hearings are held on the objections or requests for similar arrangements. The tribunal may grant or deny the original applications or applications for similar arrangements, or it may prescribe modifications in either the arrangements or charges.

Monthly settlements are made of freight charges under these contracts. The carriers bill their patrons for the units of service performed at the contract rates, avoiding thereby the clerical

expense to carriers and shippers of individual billing and accounting. Tests are made from time to time to determine whether or not material changes have taken place in the composition of the traffic. If the tests indicate that material change has occurred, appropriate modifications are made in the agreed charges, subject to review by the Railway Rates Tribunal.

The agreements usually run for a period of a year, subject to renewal or termination by either the patron or the carrier upon due notice to the other party.

The agreed rates plan has the advantages of reducing billing and accounting costs, of providing attractive average rates for patrons, and of assuring carriers that patrons will actually use the rates which are established for them. The plan is not an automatic solution of all rate problems, but it appears to have great usefulness in a considerable number of situations. Over 2,000 such agreements are now in effect, representing about £4,500,000 or over 8 per cent of the British railway carriers' revenues.

Agreed Charges in Canada

The agreed charges on the Canadian railways were suggested by those in effect in Great Britain, although they differ in certain respects. The establishment of such rates is authorized in Canada by the Transport Act, 1938. They are unit rates expressed in rates per 100 lb. or other unit of transportation service, and may be fixed for a definite period of time or without time limits. They are subject to the jurisdiction of the Canadian Board of Transport Commissioners. Parties who are interested in or affected by the arrangements are given the right to protest or to enjoy similar arrangements. The charges are published in the tariffs of the carriers. A number of bases are used—including block mileage rates, mileage-block rates up to specified distances with standard rates beyond these distances, flat rates or all-commodity mixture rates; specific rates to and from designated points, or reductions under standard commodity or class rates. They may be made on either carload or l.c.l. traffic.

Agreed rates are not so widely used in Canada as in Britain and opinions of shippers differ as to their propriety and effectiveness. These charges in Canada appear, nevertheless, to have served the interest of shippers and carriers alike in the case of some commodities—particularly petroleum products, lumber and forest products, dairy products, coal, salt, drugs and general merchandise.

Special rates on heavy-moving commodities in train-load or cargo or multiple-carload lots, upon a lower basis

of charges than the regular carload class or commodity rates, have been established in the United States for a few commodities. These rates have been approved by the Interstate Commerce Commission and by several state commissions. There appear to be no insuperable obstacles to the establishment of freight rates upon other units of weight than carload minimum weights, provided the rates are reasonable, with reference to competitive water carrier and pipeline rates with which they compete; and also provided that such rates are reasonably related to the carload minimum weight rates upon the same commodities — with the further limitation that such rates must be reasonably compensatory to the carriers; and not unjustly or unduly discriminatory, preferential or prejudicial.

Such rates are appropriate if the traffic moves or can be moved in large units, and if there are material savings effected by the actual movement, either in solid train-load lots or in multiple-car movements—through the reduction or elimination of terminal and intermediate classification yard operations or other operating economies justifying distinctions between carload and multiple-carload, or trainload-lot, or cargo rates. The rights of shippers unable to ship in large lots could be protected by permitting the shipments of several shippers or consignees to be consolidated or pooled into large units.

Large-Quantity Rates

Rates upon this large-quantity basis have been established upon several commodities, including black-strap molasses, bauxite ore, sand and gravel. In a number of other cases efforts to establish such rates in the past were nullified by the Interstate Commerce Commission or by state regulatory commissions because the circumstances under which the proposed rates were sought were found to result in unreasonable discrimination, or not to have been justified by substantial operating economies.

Another interesting variant in rates is the provision of special charges conditioned upon the shipment of specified quantities of freight within a given period of time. The tariff of a freight forwarding company providing for five different scales of rates, contingent upon quantities of freight within specified quantity brackets, was suspended in 1945 and the rates were ordered canceled by the Interstate Commerce Commission, following the precedents of several earlier forwarder cases.⁸ A similar basis of rates lower than standard carload freight rates on coal, conditioned upon the receipt by the consignee, a retail coal dealer, of 30,000

tons or more per year, at any one station of the railroad carrier, was held to be unduly discriminatory and unlawful under the Act to Regulate Commerce by the Interstate Commerce Commission in one of its early decisions handed down in 1887.⁴ Lower rates, granted on conditions with which only few shippers or consignees can comply were held by the commission in 1901 to be presumably unfair and prejudicial to all other shippers of like traffic because they could not meet the conditions under which the rates were offered.⁵

Despite, however, the evident official disfavor which this type of rate suffers, it is a significant fact that, in the *Mutual Distributing Case* in which lower flat rates conditioned upon an agreed total quantity being shipped in a period of time were held unlawful, the commission in 1944 did not condemn the lower rates, claimed to be justified by savings in billing and handling costs, without considering these claims, but found that there was no showing that there were material economies in billing and handling costs.⁶

Finally, in considering the possibilities afforded by rates designed to meet special traffic or operating conditions, the special reduced rates permitted by the Interstate Commerce Act to be made for the federal, state or municipal governments are significant. Individual carriers or several carriers, either individually or through an agent acting for the carriers, may make special rates offering transportation services at reduced rates. These rates are usually known as "Section 22 Quotations." They

are authorized to be made not only by carriers subject to Part I of the Interstate Commerce Act by Section 22 of that part of the act, but by motor carriers, by domestic water carriers, and by freight forwarders subject to other parts of the act.⁷

These contract rates were extensively used by many government agencies in moving the vast World War II traffic, and by state and municipal governments in other large public works, including, among others, the Golden Gate and San Francisco-Oakland Bridge projects. These special contract rates are permitted in consideration of the public nature of the work and of the huge tonnages involved.

It is not the purpose of this article to advocate any one or several departures in freight rate-making as necessary or desirable. All that can be accomplished by many of these varied bases of rate construction can probably also be done by the prompt and equitable establishment of properly related commodity rates. The important point to be emphasized is that the ways in which rates are made, although well buttressed by tradition and precedent, are less important than that freight rates as prices should be designed to move traffic—and to prove reasonably compensatory to carriers, and attractive and equitable to shippers and consignees.

Rates are prices for services, and if they do not follow a pattern which promotes the welfare of shipper and carrier alike by stimulating traffic rather than retarding it, then critical study and appropriate revision is called for.

⁴ *Providence Coal Case*, (1 I.C.C. 107), 1887.
⁵ *Carr v. Northern Pacific R. Co.*, (9 I.C.C. 1), 1901.
⁶ (258 I.C.C. 635), 1944.

⁷ Interstate Commerce Act, Part I, Section 22; Part II, Section 217 (6); Part III, Section 306, (c); and Part IV, Section 405 (c).

* * *



High freight train speed is not incompatible with efficient production of ton-miles, even in theory. The work of speedsters like the Pennsylvania's GG-1 electric locomotive is reflected in outstanding statistical indices

⁸ I.C.C. Docket No. 28896, 1945; (256 I.C.C. 85), 1943; (258 I.C.C. 635), 1934.

Roads Out to Keep Big L. C. L. Business

Operating devices, including truck coordination, effect speed-ups which will hold and build profitable traffic

THE wartime and postwar boom in l.c.l. traffic has forcefully demonstrated to many railroads the revenue potentialities of this type of traffic. Some railroad men and shippers will remember the Twenties, when l.c.l. traffic was considered a necessary evil by too many roads. Most all of them will recall the discouraging traffic lows of the Thirties. Today, with the current boom in l.c.l. traffic showing few signs of diminishing, there is a new awareness of the possibilities for earnings which lie in the small-lot shipment. The fact that, in spite of this high volume, the railroads actually handle only a small portion of the total—the rest being left to highway movement—is still further incentive to maximum development. There is ample evidence that many roads are keenly

alert to the possibilities in this field and are actively striving to develop their l.c.l. traffic through faster and more dependable service.

Truck Coordination

Some roads, indeed, have been active in promoting l.c.l. traffic since the late Twenties and have developed highly efficient operations, usually by combining rail and truck services.

To illustrate: One of the first carriers to experiment with means to improve its l.c.l. services by rail-truck coordination was the St. Louis Southwestern, which began operating a truck service in 1928 through the subsidiary Southwestern Transportation Company. Starting in a small way, the latter soon established truck service paralleling most of the lines of the parent railway. In 1930 the "Blue Streak," a fast merchandise train from St. Louis, Mo., to Pine Bluff, Ark., and Texarkana, was inaugurated. Although depression-born, this train became an immediate success because of the improved merchandise service it gave to cities served by the railway. Not the least important factor in its success was the inclusion of merchandise cars

to be set off during the night at key transfer stations from which truck routes radiated. By this scheme, the small way stations, for the first time, secured the same expedited rail merchandise service enjoyed by larger points to which traffic volume justified the operation of entire cars. Similarly, the trucks, from the start, have handled the small local shipments that had always been a nuisance to local freight train crews and handled them faster and at less cost to the carrier.

This Cotton Belt plan is described in detail because it was one of the earliest experiments with this type of coordination and because it is fairly typical of the systems used on other lines.

Rail-highway service now operated throughout the country has proven a boon to shippers in many ways,—chiefly in giving them expedited service to many points previously served only by slow, irregular local freight trains. Admittedly, many shippers can obtain such expedited service for at least a part of their traffic by utilizing independent truck lines. But therein lie distinct disadvantages:

Truck lines do not publish rates on all classes of traffic. The less profitable traffic is, by various means, left for the



Left—Modern highway equipment expedites the movement of merchandise traffic to small stations heretofore served only by cumbersome, costly "way" cars moving in local freight trains. Below left—Careful conditioning of box cars before loading reduces delays en route to a minimum. Below right—Railway station forces are working night and day to speed the movement of l.c.l. traffic



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Left—A telephone call is all that is required to start a shipment on its way, thanks to nearly universal railway pick-up and delivery service. Right—The New Haven will shortly have 64 flat cars equipped to handle highway trailers

railroads to handle. When a railroad goes into highway operation it remains a common carrier in the fullest sense of the term. It does not pick and choose its freight, but publishes reasonable rates for every kind of freight and gives each shipment its best service. Thus, when a railway turns its efforts to improved service by means of coordinated rail and truck schedules, the shipper receives the benefits of expedited merchandise service on *all* of his traffic, not on just that portion which is most profitable.

Trucks Cut Costs

Less direct, but nonetheless real, are the benefits of decreased cost to the railways—and eventually to the shippers—and of better freight car utilization. The distribution of l.c.l. by a local freight train is expensive. On most railroads it occupies the time of at least five men and, more often, six (engine-man, fireman, conductor and either two or three brakemen), all of whom are highly paid—at least on the basis of mileage. Although not directly charged against the shipper, such items of cost must be met by the railway, either through higher charges for all of its services or through curtailments of services which it might otherwise render. In either event, the shipper, as the railroads' only source of revenue, pays the bill.

Besides wasting expensive manpower, distribution of l.c.l. by local freight train wastes many freight cars. Because of the poor service that invariably accompanies attempts to handle l.c.l. to local stations by way-freight, local cars are seldom loaded heavily. In contrast, where rail-highway coordination is in effect, way-cars are eliminated, releasing the cars for other needed loadings. While no estimate has even been made

of the number of such cars saved daily by the substitution of motor vehicles, it must be in excess of a thousand cars a day.

Better Techniques

The railways utilize other methods for speeding the movement of l.c.l. freight, most of which are, or can be, used in conjunction with rail-highway coordination programs. The scope of operation of fast merchandise trains is covered elsewhere in this issue. The extent to which they are successful traffic-developers is due largely to the meticulous attention to operating details that lies behind their operation. A large number of "red ball" runs are shown in operating timetables as first class; i.e., they are the equivalent of passenger trains.

Special attention is given to the equipment placed therein so as to weed out, or to recondition in advance of runs, cars that may develop trouble en route and cause delay to these trains. Limited tonnage is handled on many of these trains to permit higher operating speed, particularly on adverse grades. Loading patterns at freighthouses are established so that, when the house is "pulled," trains can be made up with the cars in proper station order without time-consuming yard switching.

Special attention is given to the way-billing of merchandise shipments at major origin points to eliminate delays due to paper work. Often the billing of freight loaded in cars that will be two or three days in transit is postponed until after the departure of the cars to permit bill clerks to concentrate on bills for shipments moving to overnight destinations. In such cases the long-distance cars move on memorandum bills, while the regular waybills covering the ship-

ments in the car are completed during the evening and forwarded to the agent at destination, either by U. S. mail or by railroad mail. Some railroads even adopt such a practice on overnight shipments, but use Teletype machines to transmit facsimiles of the waybills to the destination agents at key points.

There are also studies being made—and systems adopted—to reduce the amount of paper work required in connection with shipments. For example, one road uses a form similar to the government bill-of-lading, which makes the bill-of-lading, waybill, station record (both for origin and destination), and delivery receipt at one writing, thereby substantially reducing the time required for paper work at origin and destination, and, incidentally, greatly reducing the chances for errors.

The railways have done, and are doing, much to improve their services. Virtually all of them recognize the shortcomings of their present services and are working diligently to overcome them. At times progress seems disappointingly slow. Freighthouse labor is scarce and, in the larger cities, much of it is of the inefficient "floater" type. The scarcity of freight cars affects freighthouses just as it does private shippers. Pick-up and delivery service, especially in large cities, is costly and has been subject to interruptions due to labor disturbances and to worn-out equipment that could not be replaced during the war.

Almost every railroad possesses staff men who devote their entire time to seeking ways to restore l.c.l. service to the prewar level and to improve it to higher standards. Most roads are convinced that there is profit in l.c.l. traffic, and are actively endeavoring to provide a service that will induce the nation's small-lot shippers to "ship by rail."



Furnishing advance information on inbound trains is an invaluable aid in speeding up the process of making up outgoing trains

Faster terminal handling can do more to expedite the movement of traffic than further increases in freight train speeds — Adequate supervision the key to efficiency

Saving Time at Terminals

MOVEMENT of the maximum tonnage of freight traffic at the maximum speed consistent with economy will be the goal of railway operating men in the highly competitive period that lies ahead. Indeed, competitive struggles for traffic will often force some carriers to sacrifice tonnage to achieve speed. Since tonnage and economy are usually found in mutual company, it becomes necessary for railway operating men diligently to seek means to meet the demands for both speed and economy.

An observer on a 24-hr. run on a western symbol freight train recently recorded that over 26 per cent of the transit time was spent standing in terminals, not counting the time spent in taking water, adding and cutting out helper engines and meeting trains at other than terminal points. The run was normal in every respect, and no delays were incurred by reason of equipment failures or road blocks.

Eliminate Excess Handlings

Obviously, delay at any intermediate terminal can never be entirely eliminated, unless, perchance, it is possible to do away entirely with the intermediate terminal involved. Although the impracticability of entirely eliminating many such terminals is evident, the basic idea of reducing their number is sound. The next best way to reduce terminal delay is to simplify or eliminate certain term-

inal-handling operations entirely, and any study seeking to reduce terminal delay must give considerable weight to this factor if substantial time savings are to be secured.

One step in this direction is to classify freight trains at initial terminals so as to eliminate switching at intermediate terminals entirely or reduce it to the minimum. On most railroads, operating divisions extend for about 100 mi. For many years it was customary to run trains over each such division without regard to classification or other requirements of the connecting division. The result was that freight was seriously delayed because trains were switched every 100 mi. In addition, this lack of coordination between divisions often resulted in trains being held out of terminals awaiting track room, or held in terminals awaiting switching or power or crews for further movement. Fortunately, most such practices have long since passed into limbo.

How are the types of terminal delay which still exist to be avoided? The general answer is not very complex, although, sometimes, the working out of a schedule that will satisfy all requirements is. In general, whenever traffic volume justifies, solid trains can be run between any two major points of receipt and delivery of traffic. Where the requisite volume is not available, trains can be blocked so that cars for intermediate points can be set off when cabooses or

locomotives are changed. A related item is the need for having such "fill-out" tonnage as is added at the intermediate point switched and properly blocked before the through freight arrives, to permit prompt placement of additional cars in the train.

Constant Analysis Needed

Careful study of the make-up of trains and the order in which the blocks are put together often eliminates considerable delay at intermediate points by enabling cars for two destination groupings to be placed in the train with a single switch, while at the same time the blocks are intact when the train leaves the fill-out point. In other instances, by proper analysis of the tonnage being handled, a "split block" may be made up in a train leaving an intermediate terminal which will become a unit after a set-off is made.

Obviously, such practices can be developed only by detailed studies of the traffic handled, including information as to its origin and destination, the time it is received from connections or is available for movement if originating on line, the departure time of connecting lines' trains, and the needs of the patrons. On many roads such studies are made constantly by the superintendent of transportation through his "road men" or by representatives of the general manager. Regardless of who makes them, analysis

of car movements and train operations must be made constantly to cope with changing traffic flows and requirements.

While terminal delay at destination is just as serious as delay at intermediate points, it less frequently lends itself to improvement of the type discussed. Where traffic is delivered at a final terminal to only two or three connecting lines, it is a relatively simple matter to block an inbound train at origin and at intermediate pick-up points so that the task of breaking it up can be simplified. But such procedures are often impractical where terminal interchanges involve a large number of railroads. Even in such cases, however, study of the traffic will frequently reveal heavy flows to a few connections, and cars routed via these lines can then be blocked before trains leave their initial terminals. Again, constant study of the traffic and train movements enables railroad management to take advantage of changing conditions.

Advance Information Essential

In any terminal—initial, final or intermediate—careful attention to operating details reduces the time consumed to the minimum. One of the most important factors in speedy terminal movement of freight trains is the furnishing of advance information as to the numbers and initials, destination, weight and commodity of cars in inbound trains. (Where perishable traffic is involved, heating, icing and ventilating information must also be furnished.)

A study of yard operations finds trains still being delayed at times from 30 min. to an hour, because such advance

information has not been given to permit the preparation of switch lists or side cards, the calculation of the tonnage of outbound trains and the formulation of the necessary switching moves, until after the train's arrival.

At one large terminal where side carding is the practice and inbound initial and number consists are not provided in advance of arrivals, trains remain on the tracks on which they arrive for nearly an hour before switching begins. The officers of the switching road concerned assert that they are handling 10 to 15 per cent more cars than they reasonably can be expected to handle expeditiously with this system, but they are not requiring their owner lines, for which they perform all terminal service, to furnish sufficient information in advance of the arrival of trains to permit them to move the cars promptly and thus clear their yard tracks for the receipt of additional cars.

The furnishing of advance consists to train yards also expedites the clerical phases of yard operations. Most roads require yard forces to keep records of the consists of trains arriving and departing at their terminals. Where consists are received in advance this becomes the basis for the inbound records, requiring only a check against the train and the waybills to insure its accuracy. Under conditions where substantially all cars in trains move through, this consist may also be used as the basis for the outbound record, marking only the cars cut out for any reason and indicating the cars added to the train.

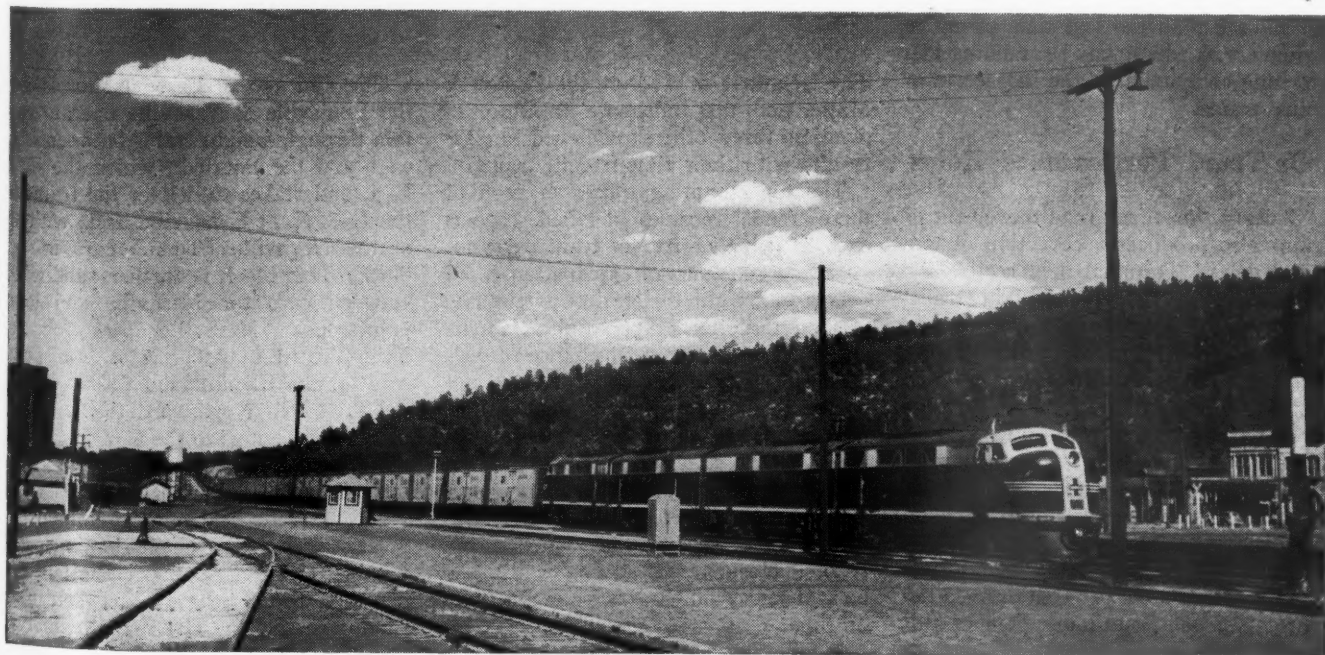
On many roads initial wheel reports are prepared by the yard forces, rather than by road conductors. Where this

practice is in effect, studies of train consists will often indicate that in certain trains large blocks of cars move intact over more than one operating district. When this condition is found, the adoption of through wheel reports (whereby a single wheel report is carried over two or more operating districts) has resulted in substantial savings in clerical time at intermediate terminals. Under such a practice, cars cut out at intermediate terminals are shown on the wheel report the same as cars set off on the line. Cars picked up at intermediate terminals are added to the wheel report in the same manner as cars picked up on line. The wire consist received in advance of the train's arrival serves as the record of through cars handled in the train. An incidental, but nevertheless important, saving resulting from this method of handling wheel reports occurs in the car accountant's office by reason of the decreased number of car movement reports that must be recorded.

Faster Terminal Inspection

The inspection of trains can also be a source of considerable time-saving when it is carefully planned. Transportation Rule 26, requiring the placement of a blue flag or blue light on cars while men are working on or under them and forbidding movement of the cars until the blue flag or light has been removed, is one of the greatest life-savers in the rule book. It can also be the source of serious yard delays if not properly used.

It has been observed, in a few flat yards, that while 70- to 100-car trains arrive in ample time to protect scheduled connections, the cars may miss their



"Main-tracking"—i.e. keeping 'em out of the yards—remains a sovereign cure for terminal delays



trains over more than one railroad. This method of running is of particular importance to smaller lines, in that it enables them to enjoy the same advantages of expedited schedules that accompany through freight trains as are enjoyed by the larger roads which operate over their own lines for long distances. There are many applications of this inter-road cooperation, of which only a few can be described in this article.

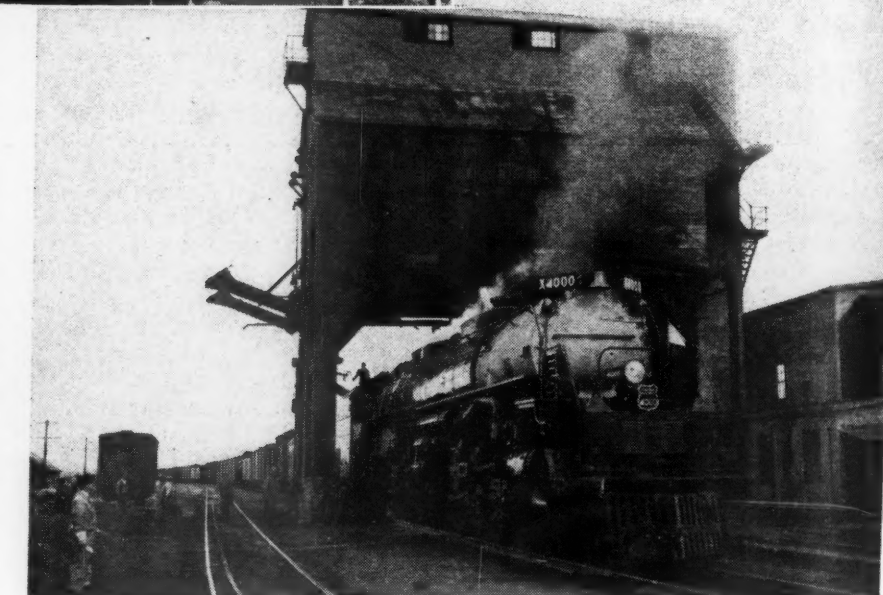
Left—In freight yards, operations are speeded up by inspecting incoming trains in "batches" and switching completed groups as soon as they are ready. **Below**—Modern servicing facilities are a great aid in extending "main-tracking"

connections because switching is held up to await inspection of the entire train. The time required for the inspection of any one car is not great, but that required for the inspection of 100 cars is considerable. Efficient yardmasters, recognizing this fact, order the clearing of the car inspectors from trains after 10 or 15 cars have been inspected and the lifting of the blue flag to permit the switch engine to start work on the inspected cars. Such a procedure is not hazardous if flagmen are properly trained. And while it may be costly to the mechanical department in time lost by car inspectors in clearing trains while cars are being moved by the switch engine, the lost time of such inspectors is far less in minutes and far less costly per minute than the lost time of entire switch crews which may be standing idle awaiting completion of the inspection of entire trains.

"On-Time" Performance Helps

Orderly, "on-time" road movement of trains also produces a reduction of terminal delay. Terminal men realize the importance of bringing freight trains into terminals in an orderly and regular manner. To help them do their job, many railroads pay close attention to road freight operation on the premise that freight trains can be run on time.

As a specific example, the Chicago, Indianapolis & Louisville, in March, brought 53 per cent of all its through freight trains into final terminals "on time"; 63 per cent arrived not more than 30 min. late, and 74 per cent arrived not more than one hour late. Two of this road's trains were on time 25 and 27 days, respectively, during this month.



The Delaware & Hudson, the Boston & Maine and the Baltimore & Ohio, to mention three others, achieved similar results with their time-freight trains.

The top operating officer of each of these roads receives detailed reports each morning of freight train performance and demands an explanation of all delays to freight trains that arrive late at their terminals. The result is apparent in the favorable performance records of these roads. The result is also apparent in their yard conditions. Trains from opposite directions or fleets of trains in the same direction do not arrive at yards at one time. Yard operations are conducted in an orderly, efficient manner because the yard does not become blocked with trains waiting to be switched. And—trains leave the yards on time.

Another aid to speedy terminal handling is the operation of through freight

The Chicago & Eastern Illinois and the Louisville & Nashville operate certain through freight trains between Chicago and the South in which the C. & E. I. undertakes to deliver the trains to the L. & N. at Evansville, Ind., with all of the Nashville (Tenn.) cars in one block. This block is further subdivided between cars for Nashville and local points near Nashville, cars for the Nashville, Chattanooga & St. Louis, and cars for the Birmingham (Ala.) line of the L. & N. Northward the L. & N. delivers the trains to the C. & E. I. with the Chicago tonnage in one block. In both directions terminal time at Evansville is thereby held to the minimum.

For many years the St. Louis Southwestern and the Southern Pacific have operated through trains between East St. Louis, Ill., and California points via Corsicana, Tex. These trains are classified by the Cotton Belt at East St. Louis

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for movement as far west as El Paso, Tex.—more than 1,500 mi. distant. Cars added at intermediate points on the Cotton Belt are cut into their proper blocks, so that when these trains are delivered to the Southern Pacific at Corsicana, cars cutting out at Hearne (Tex.) yard are in one block, those cutting out at San Antonio are in another, and those moving to El Paso and beyond are in a third.

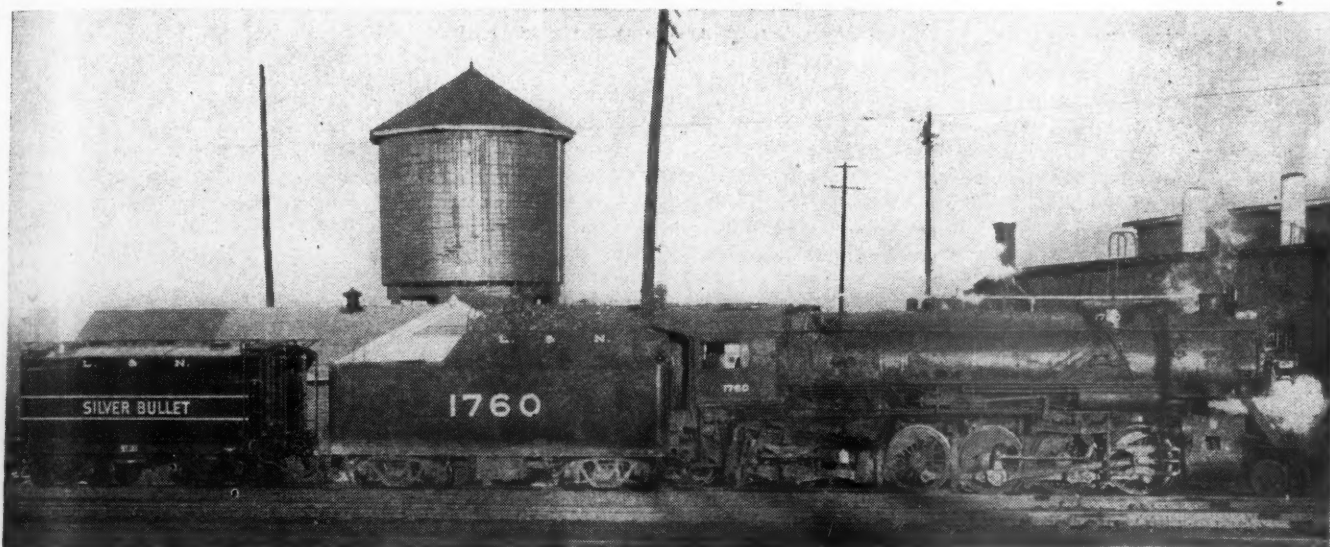
These two roads have also perfected an unusually fast interchange at Corsicana, whereby the trains of each road are interchanged to, and depart via, the other within 15 min. of their arrival—and frequently in less time. In the East, the Pittsburgh & West Virginia and the

Wheeling & Lake Erie have eliminated interchange time altogether and operate their trains through Pittsburgh Jct., Ohio, without stopping, pooling crews and motive power between Brewster, Ohio, on the W. & L. E. and Rook, Pa., on the P. & W. V., and accomplishing the necessary paper work in preparing interchange records at these yards.

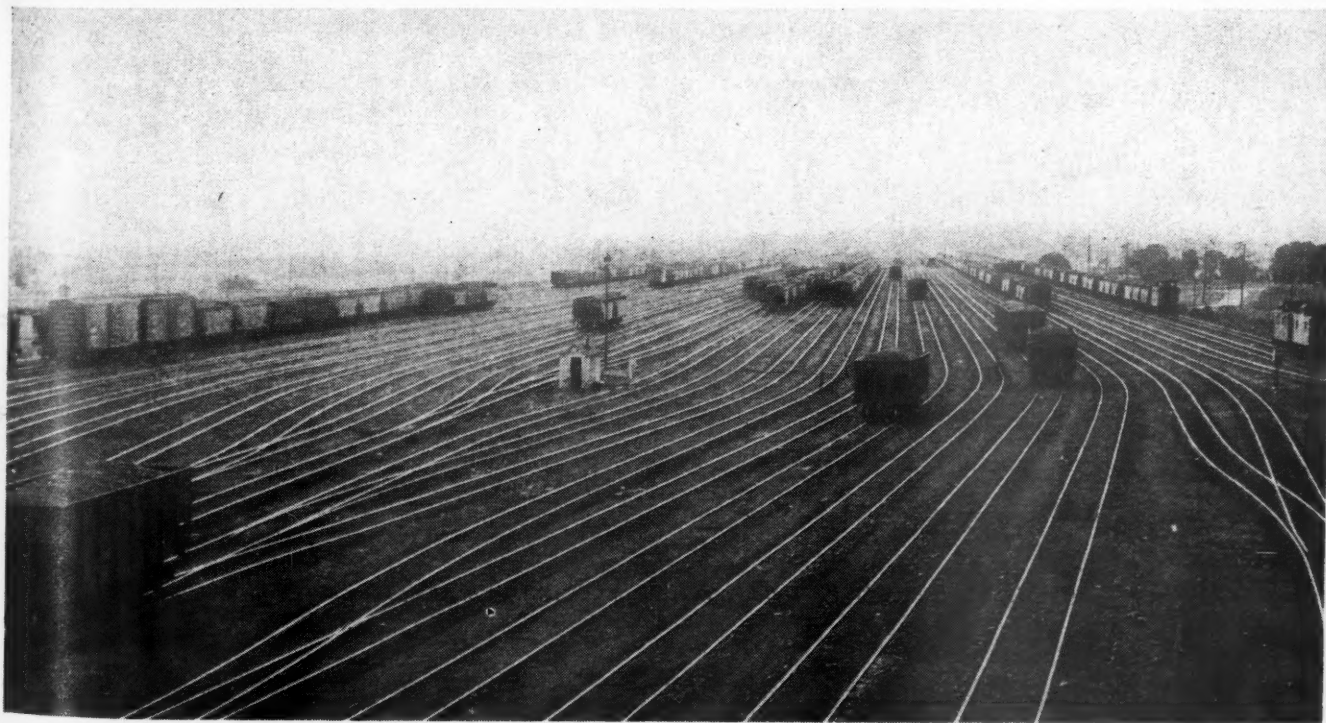
There are other operating details that contribute to faster yard and terminal movements. Such factors as the proper handling of locomotives and of train and engine crews, adequate forces, co-operation between connecting divisions and a host of others are all important. But a study of them, like a study of the points already discussed, leads to but

one conclusion—that good supervision is essential. Every one of the proven methods of speeding up terminal handling has been the product of careful thought and study by someone with both the authority and the will to see that the necessary work was done, and done right.

Good yard layouts, proper yard-lighting and yard-communication facilities, adequate yard switch engines, and many other physical factors are all important factors in expeditious terminal handling. More important still is good terminal supervision, so that such physical improvements can really "pay off" through more economical and faster terminal operation.



Above—Elimination of intermediate servicing stops shortens transit time without costly increases in train speed. An extra water tender is used by the Louisville & Nashville on its "Silver Bullet" fast freight to eliminate water stops. Below—Intelligent blocking, the furnishing of advance information, and speedy inspection accomplishes much in keeping yards free from congestion



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How Much Railroad Plant Is Needed?

Let's not stifle prosperity in America by not providing enough transportation to match our production or by discouraging investors from providing needed capital

FOR consideration by the readers of the Freight Progress Issue of *Railway Age* I would like to present some ideas which differ materially from the general tenor of discussion of the current and critical freight service shortage.

To achieve really constructive and enduring freight progress in this country, a new line of thinking is needed. We need to think of the railway freight problem, and about current and future equipment needs, in their relation to our expanding American economy.

History shows that, on the average, we, the people of the United States, have doubled our demand for railway transportation every fifteen years.

That is a part of the steadily expanding American economy picture. In a general way, we recognize that this expansion has been going on since the earliest days of our nation—and, more rapidly, in the production of more goods for more persons, than anywhere else in the world. But it is perhaps natural that when we look backward at recent years and try to measure this expansion, our thinking grows a bit dim; because we have been emerging from a fifteen-year period which was both subnormal and abnormal. Our national economy was subnormal during the depression and abnormal conditions prevailed during the war.

Economy Is Expanding

Therefore, it is perhaps natural also that about 100 per cent of the discussion of the freight service crisis seems to have been based on the assumption that time has been standing still; or on an assumption that our economy is static, instead of expanding.

We have seemed intent on discussing, merely, how to obtain enough new freight cars to insure that we will continue to have in operation as many freight cars as are now owned by the railroads. Curiously, this sort of discussion continues even while there is more general realization that there just aren't enough cars to do the current freight hauling job.

This is short-sighted thinking. For a longer-range view of the freight service crisis, and why it faces us today, let's have a quick look at two basic industries which are regarded as barom-

By S. M. FELTON

President, American Railway Car Institute

eters of industrial and business activity generally:

1.—**Steel**—This industry has doubled tonnage of output in 25 years. Production was 39,000,000 tons in 1922. It is at the rate of 85,000,000 tons annually now. The present rate is even almost double that of the prosperous Twenties, when the annual average output was 44,500,000 ingot tons. But there are available now to serve the steel industry—and the steel industry's 33,600 steel processing customers—600,000 fewer freight cars than were operating in 1922.

2. **Electric Power**—During the first quarter of this year the production of electricity was at a rate of about two and one-half times the level of 1930. Of course, that means a very large increase of assembly-line activity, everywhere, and a consequent increase in both materials and finished goods to be moved in freight cars. But, to provide freight service for all of the thousands of electrically-driven industries 500,000 fewer freight cars are available than were in use in 1930.

Giving all due credit to the railroads for better utilization of freight cars than in earlier years, it is still obvious that such improvements in car use cannot make up for the loss of half a million cars.

Production and use of electricity this year, incidentally, have been running more than 20 per cent higher than last year; and at a rate actually above the 1944 wartime peak. This should tell us something about the extent to which, finally, we have been working our way through assorted reconversion difficulties and into expanded production of peacetime goods—on which it should be possible to build stable prosperity.

Our economy isn't static. It is expanding. Hence it seems obvious that we should back up and think again about the nation's freight service needs, present and future; and about the number of freight cars we need to make doubly sure that this vital service will not bog down.

If we turn from the basic "barometer"

industries—steel and electrical power—to consider the railway transportation industry, it is not possible to prove convincingly, as yet, that "we, the people" have doubled our demand for freight transportation in the past fifteen years. But what does prove up is worth thinking about.

It would serve no purpose to compare the current rail freight load with exactly fifteen years ago because 1932 was one of the low-traffic depression years. But let's consider the traffic level during the prosperous Twenties and see what we get. The average annual number of ton-miles produced during that decade was 415 billion. Last year's traffic—in a troubled, strike-handicapped reconversion year—was up from the Twenties nearly 50 per cent, crowding 600 billion ton-miles. During the first quarter of 1947 ton-miles carried were at the annual rate of 625 billion.

The railroads have been doing a fine job in carrying such loads with inadequate equipment; but it is worth remembering that they now are in their seventh year of "sprinting"—doing more than was thought possible. And now they face an even bigger task.

Traffic Up One-Fifth

The thirteen Regional Advisory Boards recently estimated the freight traffic demand during the second quarter of this year would exceed the second quarter of last year by 33.2 per cent. The Association of American Railroads pointed out, correctly, that this figure, taken alone, might be misleading because the volume of freight traffic was reduced by many hampering strikes during the second quarter of last year. However, figures presented by Dr. J. H. Parmelee, of the A.A.R., in the Annual Statistical Issue of *Railway Age*, indicate that the "heavy strike quarter" showed a freight traffic loss of only 13 per cent as compared with the previous year's average.

Thus it becomes a reasonable assumption that the Advisory Boards—which have a record for accuracy—estimate the demand for freight traffic this quarter will run 20 per cent above the average for last year. That would work out at an annual rate of 710 billion ton-miles; which approaches the 1944 wartime

peak—and which is a figure about 75 per cent higher than the average during the prosperous Twenties.

The production of steel alloys is reported 300 per cent higher than pre-war; many plastic industries are expanding; air conditioning and household appliances are setting new goals; automotive production is increasing; paper products, frozen foods—in almost all lines there is a reach for new levels of peacetime production. Each requires more freight service. It looks as if “we, the people” again are about to double our previous peacetime peak demand for transportation.

Rising Demand Will Continue

There is no reason for believing that the freight traffic demand should not go on rising in the years immediately ahead of us. Those 15 years of depression and war were both subnormal, in one respect: throughout all of them there was a low production rate on the many kinds of useful things everybody needs, and an even lower rate of output on many other items which rate as comforts or luxuries.

We, the people, still want those things; and industry only now is really getting into gear to give them to us. Of course, this will involve further increases in the freight load which must be carried. We have had an under-supply of goods for a decade and a half—and, during that period our population has increased by nearly one-sixth.

And it follows that the people of this country cannot have delivered to them all the many things they want if “the freight car population” remains static, or continues to slip backward. Nor can all these wanted goods even be manufactured if there aren’t enough freight cars to deliver enough materials to factories.

In America’s incredibly intricate and amazingly efficient productive machine, the freight train has become almost literally a part of the assembly line. Normally, raw materials and parts flow with timed precision into manufacturing plants—with a minimum of storage of supplies necessary. Also, finished products move in a steady flow outward toward markets. Freight service has been so carefully geared to production demands that usually there is less need for extensive warehousing.

Precisely because all this has worked so well in the past, there is the more reason why any faltering of freight service quickly affects the production line. Industries generally are not well equipped to stock-pile materials and to warehouse, on a wholesale basis, finished products. They feel *quickly* the effects of any freight car shortage. It means reduced output, and layoffs in industry. Freight car shortages also result in diversion of freight to other types of trans-



Fabian Bachrach

S. M. Felton

portation—which means a loss in railroad revenue.

Certainly the American people do not want reduction in production, employment and railroad revenue—especially at this time.

The current freight car shortage is the product of a period without parallel in American history: ten years of depression, followed by five years of war. During the earlier period, the railroads were almost broke; during war, the building of freight cars was limited by government order. As a result, during a decade and a half about half as many new cars were installed as were needed on a normal replacement basis. Naturally the over-age score and the repair needs have risen alarmingly.

Look to the Future

It is easy enough, now, to say that somehow we should have been able to turn quickly from war to the badly needed, large-scale building of freight cars. But 1946 was a very difficult year for all of us, and especially for the railroads. They watched rising costs eat into reserves acquired from peak wartime traffic. Many went into the red. As a whole they showed net income of only 2¼ per cent, before tax carry-back credits; and it is doubtful if earnings will go much above 3 per cent this year—in spite of new peacetime peak freight traffic and higher rates. Obviously, last year they did not feel safe in ordering equipment on a scale permitting car builders to operate on a mass production basis. Nor, were the builders able to obtain enough steel for sharply stepped-up output.

However, 1946 is past; and the problem now is: Where do we go from here—and how?

My conviction is that we need to go faster in postwar rehabilitation of the railroads. Also, as originally indicated, that in order to size up the freight problem in true perspective, we need to think about it in its relation to expanding American economy. Our expanding economy cannot be served adequately by a contracting railroad transportation service.

The figures cited here showing expanded industrial activity, and expanding demand for freight service, suggest that we must think in larger terms about the number of new freight cars needed, quickly; and about the need for a steady volume of car-building extending five or ten years into the future. The purpose here is to make no suggestion regarding the exact number needed, but to urge hard-headed restudy of the problem of providing enough cars for adequate freight service. Our sights have been aimed too low.

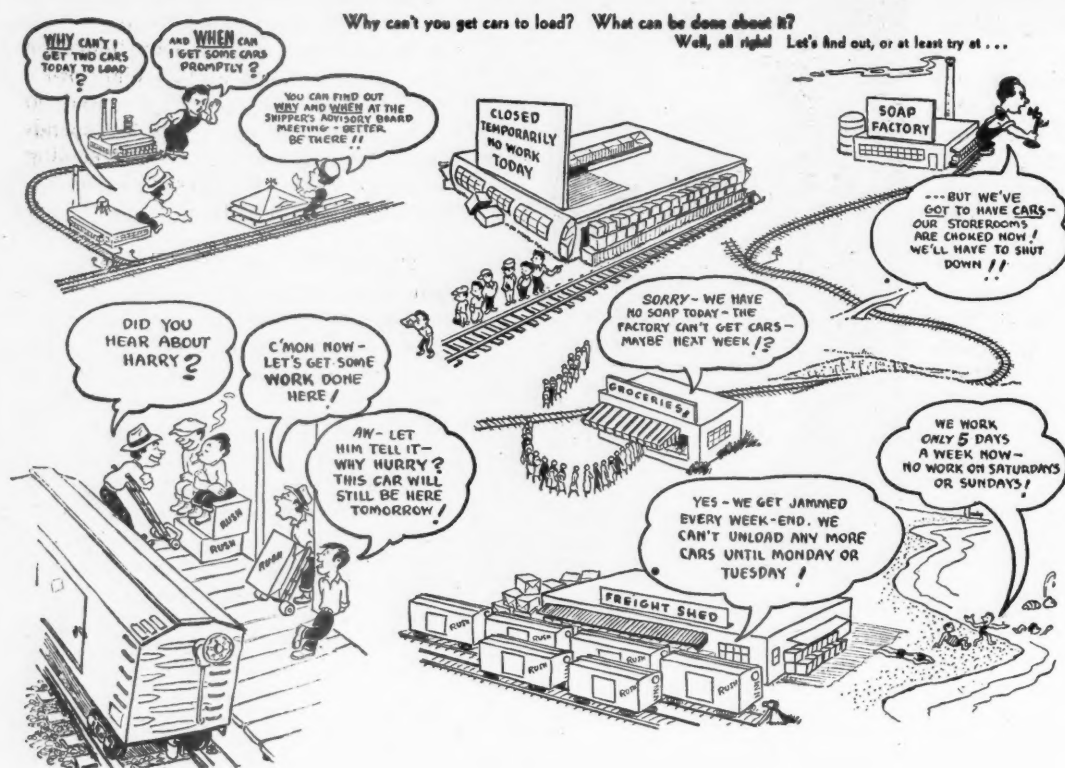
This is probably the nation’s biggest remaining reconversion task. It is not merely a railroad problem, it is a national problem—and one which really rates in an “or else” category. Failure to solve it could even result in the wiping out of many of the reconversion gains already achieved.

It should be quite evident that the overall railroad re-equipment, modernization and expansion program now so badly needed—following the wear and tear of a long and high-speed war—cannot be underwritten out of current railroad income. Nor is it possible to attract enough new investment dollars for needed capital outlays, while railroad finances remain in a precarious condition.

The first need, therefore, is that the railroads be given the conditions necessary for them to secure earnings attractive to private investors—in order that they may acquire the plant they will need to meet the transportation requirements of the nation.



A Pittsburgh & West Virginia freight train tackles the hills in Pennsylvania



Background of the freight car shortage—as interpreted by the New England Shippers Advisory Board

Freight-Car Program Gets Slow Start

After much pressure and grinding of gears steel is promised (1) for program of 7,000 cars a month and (2) for 10,000 cars a month—So far rate is under 3,000 a month

DURING World War II American railroads established records, of transportation capacity which even those thoroughly familiar with the industry did not believe possible. With an inadequate supply of freight cars at the outset, which they were unable adequately to supplement, they got through until the fall of 1943 without shortages. Net ton-miles per car loaded had increased from about 12,000 to over 18,000 during 1943 and 1944 and there the limit was reached.

Since the fall of 1943 the freight-car situation has been getting progressively worse, as a comparison of car shortages for the first quarters of 1944 to 1947, inclusive, clearly indicates.

The situation has now become acute. Perhaps the simplest way to indicate its effects and particularly to suggest some of the dangers arising from the continued shortage of transportation capacity is to review events of 1946 and 1947 pertaining to the procurement of freight cars and their use as they have appeared in the news during the first quarter of the current year. Nothing

is included in this review which has not been noted in earlier issues of this publication.

Chronology

The Theme Song.—At a press conference on December 30, 1946, Colonel J. Monroe Johnson, director of the Office of Defense Transportation, declares that unless more steel is diverted to the manufacture of freight cars, "production in the United States will be retarded by the want of transportation." He explains that a plan whereby the Reconstruction Finance Corporation would finance the purchase of 50,000 box cars was abandoned during the year and efforts to get adequate steel allocations for freight-car building through Civilian Production Administration channels were not successful. The railroad industry, he says, ranked sixth in the distribution of steel to consuming industries during the first half of 1946. The majority of the steel went to jobbers, dealers, and distributors, followed by the automotive, container,

construction, and converting and processing industries.

7,000 Cars a Month.—In his final report to President Truman, John D. Small, civilian production administrator, says that by the second quarter of 1946 "it became apparent that a critical shortage would occur during the third and fourth quarters." During the third quarter, he reports, C. P. A. informally requested the steel industry to provide more steel to the car builders to meet a goal of 7,000 cars a month for the remainder of 1946 and through 1947.

Shippers Worried.—Early in January the N. I. T. League addresses a letter to the presidents of the Class I railroads asking them to increase orders for freight cars.

Kendall Optimistic.—At a press conference in New York on January 9 Warren C. Kendall, chairman of the Car Service Division, Association of American Railroads, says that despite the car shortages the railroads are handling about 90 per cent of the available business. He expected the turning point in box-car supply late in January. The

present freight-car ownership of the railroads, he says, is 1,750,000 freight cars and they need 125,000 more to handle current demands. The need for 100,000 box cars and 15,000 refrigerator cars is urgent.

Machinery.—The Freight-Car Builders Industrial Advisory Committee is set up at a joint meeting of C. P. A.'s Steel Products Advisory Committee and steel industry representatives in Washington on January 10 to work with the steel branch of the C. P. A. section of the Office of Temporary Controls in channeling steel to the production and repair of domestic freight cars. Government officials say that new freight-car output must be raised to at least 7,000 units a month, as compared with 3,120 in December, 1946. Representatives of O. D. T. believe the output could be raised to 10,000 cars a month. The C. P. A. steel committee points out that in addition to heavy requirements for steel plate and sheets, car wheels and axles were in "extremely tight supply" and that car wheels probably would prove to be the limiting factor toward increasing freight-car production. The steel company representatives also express doubt that the industry could supply sufficient components to insure the production of 10,000 freight cars monthly with "any degree of promptness."

"Keep 'em Moving."—That, says Mr. Kendall in his monthly review of the national transportation situation, is the only way to meet expected increases in car loadings.

Scott Makes Charges

Western Shippers Testify.—Before the subcommittee of the Senate committee on interstate and foreign commerce investigating the shortage of box cars, Walter R. Scott, executive vice-president of the Board of Trade, Kansas City, Mo., typifies shippers testimony. He blames the I. C. C., O. D. T., and C. S. D. for "apparently being unwilling to admit that the recent car shortages have been due to the dislocation of cars" and insists that "steps should be taken to keep the cars in balance in relation to their ownership." He says the A. A. R. "is reputed to be dominated by the powerful railway systems of the East."

10,000 Cars a Month.—Colonel Johnson in testimony before the subcommittee of the Senate committee on interstate and foreign commerce discloses that the American Iron & Steel Institute during the week of February 8 assured him they will provide enough steel to build 10,000 freight cars a month.

Felton Speaks for Car Builders.—At

the same session S. M. Felton, president of the American Railway Car Institute, testifies that the carbuilding industry, exclusive of railroad shops, has a capacity of 14,000 freight cars a month. During 1946, he adds, the builders received only 48,000 tons of steel monthly as compared to the 179,000 tons needed to produce 10,000 cars a month.

Dislike Service Orders and Priorities.—Western railway officers tell the committee that the distribution of freight cars would be more equitable if there were no service orders or priorities.

And, Now, C. P. A.—The C. P. A. states during the week of February 8 that the steel industry "has undertaken to provide enough rolled-steel products for an indefinite period to put an additional 7,000 cars monthly on the nation's railroads and also to rehabilitate existing rolling stock." The full program calling for monthly deliveries ranging from 165,000 to 175,000 tons of steel is expected to be in effect in April and thereafter.

C. S. D. States Needs.—In its annual report C. S. D. reveals recommendations resulting from ownership studies made early in 1946 calling for orders during that year for a total of 107,298 freight cars by A. A. R. members, and, on July 16, for a suggested allocation of 50,000 box cars to be ordered immediately and 21,550 additional box cars to be provided before October 1, 1947. Orders actually placed by the railroads in 1946 were 43,325. Cars built for the railroads and private car owners totaled

41,752. The report reviews orders issued by the division to require empty car movement in undertaking "to equalize the car shortages as between different sections of the country and the different railroads."

U. S. Chamber of Commerce Expresses an Opinion.—In the February 7 issue of Business Action, a publication of the Chamber of Commerce of the United States, it is said that the box-car shortage "dates back to the failure of government officials controlling the allocation of critical materials during and since the war to recognize the serious need for transportation equipment." Continuing, it says, "A recently promised program for allocation of materials for 7,000 new cars a month of all types has only been half met."

Open-Tops, Too

Coal Cars Are Short, Too.—Before the Senate subcommittee on February 6 Colonel Johnson says that the shortage of coal cars is "as acute and critical" as the shortage of box cars and that additional rail equipment must be built "at a sacrifice of other industries." He believes that punitive per diem would decrease the dislocation of cars. He also criticizes (1) the C. P. A. branch of Office of Temporary Controls for allocating steel for 1,100 tank cars for shipping fertilizers to Japan and Manchuria; (2) Secretary Krug for alleged failure while head of the War Production Board to keep his promise to

These scrap box cars being burned at the South Louisville shops of the Louisville & Nashville are among the "expected yearly retirements of 35,000 box cars"



Freight-Train Cars on Order for Domestic Service May 1, 1947

RAILROADS		No.	Type	Capacity tons	Builder
Akron, Canton & Youngstown.....		25	Cov. hopper	70	Amer. Car & Fdy.
		6	Caboose	30	Intern'l Ry. Car
		50	Box	50	R. R. Shops
		750	Box	50	General American
		500	Auto	50	Pressed Steel
Ann Arbor.....		250	Box	50	Pullman-Standard
		100	Caboose	..	R. R. Shops
		1,000	Box	50	R. R. Shops
		225	Hopper	70	Pullman-Standard
		50	Box	50	Pullman-Standard
Atlanta & West Point.....		500	Auto box	50	Amer. Car & Fdy.
		1,000	Hopper	50	Amer. Car & Fdy.
		3,000	Hopper	50	Bethlehem Steel
		1,000	Box	50	Pressed Steel
		500	Hopper	70	Pressed Steel
Baltimore & Ohio.....		500	Hopper	50	Pullman-Standard
		961	Hopper	70	Pullman-Standard
		500	Hopper	50	Ralston
		500	Box	50	Pullman-Standard
		200	Pulpwood	50	Pullman-Standard
Boston & Maine.....		1,250	Box	50	Amer. Car & Fdy.
		125	Cov. hopper	70	Harlan & Hollingsworth
		10	Hopper	50	Amer. Car & Fdy.
		1,000	Hopper	70	General American
		1,000	Box	50	Pullman-Standard
Chesapeake & Ohio.....		10	Box	50	R. R. Shops
		3,000	Hopper	70	Amer. Car & Fdy.
		300	Hopper	50	Pullman-Standard
		1,000	Box	50	Amer. Car & Fdy.
		50	Hopper	70	General American
Chicago & Eastern Illinois.....		2,100	Box	50	R. R. Shops
		200	Stock	40	R. R. Shops
		100	Flat	50	R. R. Shops
		500	Box	50	Pullman-Standard
		100	Cov. hopper	70	Amer. Car & Fdy.
Chicago & North Western.....		100	Hopper	70	General American
		500	Box	50	Pullman-Standard
		2,000	Gondola	50	R. R. Shops
		500	Hopper	50	R. R. Shops
		150	Cov. hopper	70	R. R. Shops
Chicago & Western Indiana.....		25	Caboose	..	R. R. Shops
		400	Box	50	Amer. Car & Fdy.
		8	Caboose	30	Intern'l Ry. Car
		400	Gondola	50	Bethlehem Steel
		50	Cov. hopper	70	Greenville
Chicago, Burlington & Quincy.....		100	Box	40	R. R. Shops
		200	Hopper	50	R. R. Shops
		500	Gondola	50	Pressed Steel
		10	Caboose	..	R. R. Shops
		329	Hopper	50	Amer. Car & Fdy.
Chicago Great Western.....		500	Box	50	Magor
		100	Hopper	70	Greenville
		500	Box	50	General American
		200	Hopper	70	General American
		10	Cov. hopper	70	Greenville
Chicago, Indianapolis & Louisville.....		19	Cov. hopper	70	Harlan & Hollingsworth
		50	Box	50	Pullman-Standard
		200	Box	50	Amer. Car & Fdy.
		1	Caboose	30	Intern'l Ry. Car
		200	Flat	50	Amer. Car & Fdy.
Chicago, Milwaukee, St. Paul & Pacific...		500	Box	50	Amer. Car & Fdy.
		1,600	Box	50	Amer. Car & Fdy.
		2,000	Gondola	50	Greenville
		500	Hopper	50	Pullman-Standard
		150	Cov. hopper	70	Ralston
Chicago, St. Paul, Minneapolis & Omaha..		500	Box	50	Pullman-Standard
		8	Caboose	30	R. R. Shops
		400	Gondola	50	R. R. Shops
		50	Cov. hopper	70	Amer. Car & Fdy.
		100	Box	40	Amer. Car & Fdy.
Cincinnati.....		200	Hopper	50	Greenville
		100	Box	50	R. R. Shops
		500	Gondola	50	Pressed Steel
		10	Caboose	..	R. R. Shops
		329	Hopper	50	Amer. Car & Fdy.
Delaware, Lackawanna & Western.....		500	Box	50	Magor
		100	Hopper	70	Greenville
		25	Hopper	50	General American
		10	Cov. hopper	70	General American
		50	Cov. hopper	70	Greenville
Delray Connecting.....		19	Cov. hopper	70	Harlan & Hollingsworth
		50	Box	50	Pullman-Standard
		200	Box	50	Amer. Car & Fdy.
		1	Caboose	30	Intern'l Ry. Car
		200	Flat	50	Amer. Car & Fdy.
Detroit & Mackinac.....		500	Box	50	Amer. Car & Fdy.
		300	Hopper	50	Amer. Car & Fdy.
		50	Box	50	Greenville
		10	Box	50	Pullman-Standard
		10	Air dump	50	Ralston
Detroit & Toledo Shore Line.....		500	Box	50	Pullman-Standard
		500	Box	50	R. R. Shops
		50	Auto	50	R. R. Shops
		1,287	Box	50	Amer. Car & Fdy.
		80	Auto	50	Amer. Car & Fdy.
Detroit, Toledo & Ironton.....		500	Hopper	50	Amer. Car & Fdy.
		900	Hopper	50	General American
		154	Hopper	50	R. R. Shops
		1,000	Box	50	R. R. Shops
		500	Auto	40	R. R. Shops
Donora Southern.....		350	Box	50	Amer. Car & Fdy.
		500	Hopper	50	Virginia Bridge
		50	Auto	50	R. R. Shops
		50	Cov. hopper	70	R. R. Shops
		50	Stock	40	R. R. Shops
Elgin, Joliet & Eastern.....		25	Cov. hopper	70	Darby Corp.
		1,200	Box	50	Pullman-Standard
		100	Gondola	70	Bethlehem Steel
		500	Box	50	Pullman-Standard
		100	Pulpwood	70	Amer. Car & Fdy.
Erie.....		1,950	Hopper	50	Amer. Car & Fdy.
		200	Hop. bal.	70	Amer. Car & Fdy.
		300	Flat	50	Greenville
		994	Box	50	Pressed Steel
		2,850	Hopper	50	Pullman-Standard
Georgia.....		15	Cov. hopper	70	Amer. Car & Fdy.
		250	Box	50	Amer. Car & Fdy.
		600	Box	50	Pullman-Standard
		250	Hopper	70	General American
		42	Flat	50	Pullman-Standard
Grand Trunk Western.....		20	Cov. hopper	70	Amer. Car & Fdy.
		50	Cov. hopper	70	Amer. Car & Fdy.
		100	Trip. hop.	70	Amer. Car & Fdy.
		18	Container	70	R. R. Shops
		100	Cov. hopper	70	Amer. Car & Fdy.
Great Northern.....		400	Trip. Hop.	70	Amer. Car & Fdy.
		100	Hop. bal.	70	Amer. Car & Fdy.
		800	Box	50	Pressed Steel
		600	Auto	50	R. R. Shops
		50	Cov. hopper	70	R. R. Shops
Gulf Coast Line.....		50	Gondola	70	R. R. Shops
		100	Rack	50	R. R. Shops
		35	Caboose	..	R. R. Shops
		500	Box	50	Pullman-Standard
		1,287	Box	50	Amer. Car & Fdy.
Gulf, Mobile & Ohio.....		80	Auto	50	Amer. Car & Fdy.
		500	Hopper	50	Amer. Car & Fdy.
		900	Hopper	50	General American
		154	Hopper	50	R. R. Shops
		1,000	Box	50	R. R. Shops
Illinois Central.....		500	Auto	40	R. R. Shops
		350	Box	50	Amer. Car & Fdy.
		500	Hopper	50	Virginia Bridge
		50	Auto	50	R. R. Shops
		50	Cov. hopper	70	R. R. Shops
Illinois Terminal.....		50	Stock	40	R. R. Shops
		25	Cov. hopper	70	Darby Corp.
		1,200	Box	50	Pullman-Standard
		100	Gondola	70	Bethlehem Steel
		500	Box	50	Pullman-Standard
International-Great Northern.....		100	Pulpwood	70	Amer. Car & Fdy.
		1,950	Hopper	50	Amer. Car & Fdy.
		200	Hop. bal.	70	Amer. Car & Fdy.
		300	Flat	50	Greenville
		994	Box	50	Pressed Steel
Kansas City Southern.....		2,850	Hopper	50	Pullman-Standard
		15	Cov. hopper	70	Amer. Car & Fdy.
		250	Box	50	Amer. Car & Fdy.
		600	Box	50	Pullman-Standard
		250	Hopper	70	General American
Lehigh Valley.....		42	Flat	50	Pullman-Standard
		20	Cov. hopper	70	Amer. Car & Fdy.
		50	Cov. hopper	70	Amer. Car & Fdy.
		100	Trip. hop.	70	Amer. Car & Fdy.
		18	Container	70	R. R. Shops
Louisiana & Arkansas.....		100	Cov. hopper	70	Amer. Car & Fdy.
		400	Trip. Hop.	70	Amer. Car & Fdy.
		100	Hop. bal.	70	Amer. Car & Fdy.
		800	Box	50	Pressed Steel
		600	Auto	50	R. R. Shops
Louisville & Nashville.....		50	Cov. hopper	70	R. R. Shops
		100	Gondola	70	R. R. Shops
		100	Rack	50	R. R. Shops
		35	Caboose	..	R. R. Shops
		500	Box	50	Pullman-Standard
Maine Central.....		1,287	Box	50	Amer. Car & Fdy.
		80	Auto	50	Amer. Car & Fdy.
		500	Hopper	50	Amer. Car & Fdy.
		900	Hopper	50	General American
		154	Hopper	50	R. R. Shops
Minneapolis & St. Louis.....		1,000	Box	50	R. R. Shops
		500	Auto	40	R. R. Shops
		350	Box	50	Amer. Car & Fdy.
		500	Hopper	50	Virginia Bridge
		50	Auto	50	R. R. Shops
Minneapolis, St. Paul & Sault Ste. Marie..		50	Cov. hopper	70	R. R. Shops
		100	Trip. hop.	70	Amer. Car & Fdy.
		18	Container	70	Amer. Car & Fdy.
		100	Cov. hopper	70	Amer. Car & Fdy.
		400	Trip. Hop.	70	Amer. Car & Fdy.
Missouri-Illinois.....		100	Hop. bal.	70	Amer. Car & Fdy.
		800	Box	50	Pressed Steel
		600	Auto	50	R. R. Shops
		50	Cov. hopper	70	R. R. Shops
		100	Gondola	70	R. R. Shops
Missouri-Kansas-Texas.....		100	Rack	50	R. R. Shops
		400	Caboose	..	R. R. Shops
		500	Box	50	Pullman-Standard
		1,287	Box	50	Amer. Car & Fdy.
		80	Auto	50	Amer. Car & Fdy.
Missouri Pacific.....		500	Hopper	50	Amer. Car & Fdy.
		900	Hopper	50	General American
		154	Hopper	50	R. R. Shops
		1,000	Box	50	R. R. Shops
		500	Auto	40	R. R. Shops

allocate steel and other materials for freight cars; and (3) the "inexcusable" increase in the number of bad-order cars from the wartime 2 per cent to the then prevailing 5 per cent.

More About Tank Cars.—Harold Stein, commissioner of War Mobilization and Reconversion, O. T. C., says his agency has "specifically directed a program to assist the railroads in obtaining supplies for the maintenance and repair of their rolling stock and for increasing the fleet of tank cars." Directives by C. P. A. were issued to steel producers to insure delivery of material for 530 tank cars in 1946 and 665 additional tank cars before March 31, 1947.

Pressure from West Virginia.—The Senate subcommittee seeks to learn whether there is a car shortage in the northern West Virginia mining area. Colonel Johnson cites the increase in strip mining in northern West Virginia from approximately one million tons in 1941 to nearly twelve million tons in 1945 as causing "a severe impact" upon the railroads serving that area, notably the Baltimore & Ohio. Borrowed cars have had to be returned. The B. & O. has 4,000 on order, is in process of ordering 4,000 more, and, during January, began to receive 15 new cars per day.

Grain Storage Space Short

The Only Answer—More Cars.—Before the Senate subcommittee on February 13 and 14 Mr. Kendall says that "the only lasting cure for the shortage is an increase in the supply of freight cars." He suggests that there should be a review of the grain storage situation to determine whether farm and terminal storage facilities have kept pace with the record increase in the production of grain and grain products. "It appears reasonable to suppose that an increase in storage facilities would be helpful in relieving the situation in respect to car shortages." Replying to Walter R. Scott, he said that the current departure from car service rules arises from the fact that 2,264,019 cars were available in 1918 for the movement of slightly more than 400 billion ton-miles, while in 1946 1,752,662 cars moved 591 billion ton-miles. "It would be wholly impossible to observe the rules at this time without sacrificing

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ago to 13 days during January, 1947. It would require the building of 60,000 box cars annually, he says, to offset expected yearly retirements of 35,000 box cars and to effect an annual increase in ownership of 25,000 box cars.

Eastern Roads vs. Western Roads.—F. E. Sperry, general superintendent transportation, Chicago, Burlington & Quincy, epitomizes the testimony of officers of the western roads when he declares that (1) ownership should be the controlling factor in car distribution among the railroads; (2) per diem should be increased to a figure "which will represent the value of use of such equipment" and, if necessary, the I. C. C. should be authorized by law to increase per diem charges above a compensatory level; (3) 12,000 new freight cars should be added to the supply monthly; (4) as soon as the existing shortage is relieved, car service rules 1 to 4 inclusive should again be made effective by mandatory government order, if necessary, "to the end that cars will be more promptly returned to owner roads where they can be properly repaired and upgraded." H. E. Bixler, general superintendent transportation, New York, New Haven & Hartford, says that a penalty charge in the per diem rate would "inevitably produce inequities." It would apply to the normal days of possession as well as to the days beyond normal.

A Discouragement to Shipper Cooperation.—E. F. Lacey, executive secretary of the N. I. T. League, says that many shippers are loading and unloading cars on Saturdays and Sundays and that when these cars remain on industrial sidings indefinitely it is "very discouraging" to both labor and management.

Conference in Washington

Anarchy.—J. B. Keeler, vice-chairman of the Emergency Transportation Committee of the N. I. T. League, says that "today shipper is alined against shipper; area against area; carrier against carrier, in a battle for cars. We hope that in this battle for cars the infinitely more important factor of getting more cars built just as rapidly as possible will not be subordinated. In that lies the only solution of the problem."

Senator Reed Calls a Conference.—At a conference called February 26 by the subcommittee of the Senate committee on interstate and foreign commerce, attended by officers of 18 Class I roads, representatives of eight car builders, 11 steel companies, the I. C. C., O. D. T., C. P. A. Branch of O. T. C., and other government agencies, the steel manufacturers promise the allocation of enough steel to car builders to

Freight-Train Cars on Order—continued

Purchaser	No.	Type	Capacity tons	Builder
Nashville, Chattanooga & St. Louis.....	500	Box	50	Pullman-Standard
	200	Gondola	50	Pullman-Standard
	300	Hopper	50	Pullman-Standard
New York Central.....	1,000	Box	55	R. R. Shops
	1,000	Auto	55	R. R. Shops
New York, Chicago & St. Louis.....	600	Box	50	Pullman-Standard
	10	Box	50	R. R. Shops
New York, New Haven & Hartford.....	75	Caboose	30	Intern'l Ry. Car
	1,500	Box	50	Pullman-Standard
	10	Dump	50	Ralston
Norfolk & Western.....	100	Cov. hopper	70	R. R. Shops
Norfolk Southern.....	250	Box	50	Pullman-Standard
Northern Pacific.....	250	Refrig.	40	Pacific Car & Fdy.
	1,000	Box	50	R. R. Shops
	1,100	Box	70	R. R. Shops
Pennsylvania.....	25	Caboose	30	Harlan & Hollingsworth
Pere Marquette.....	200	Hopper	50	Pressed Steel
Pittsburg & Shawmut.....	100	Cov. hopper	70	R. R. Shops
Reading.....	1,000	Box	50	R. R. Shops
	25	Caboose	..	R. R. Shops
St. Louis-San Francisco.....	20	Caboose	70	Pullman-Standard
Seaboard Air Line.....	375	Phosphate	50	Pullman-Standard
	50	Auto	50	Pullman-Standard
	500	Box	50	Pullman-Standard
	300	Hopper	70	Pullman-Standard
Southern Pacific.....	50	Caboose	..	Amer. Car & Fdy.
	500	Flat	70	Amer. Car & Fdy.
	1,500	Box	50	Amer. Car & Fdy.
	100	Cov. hopper	70	General American
	500	Auto	50	Pressed Steel
	1,500	Gondola	50	Pressed Steel
	2,500	Box	50	Pullman-Standard
	500	Gondola	50	Ralston
	100	Gondola	70	R. R. Shops
Southern.....	250	Hop. bal.	70	Amer. Car & Fdy.
	1,000	Hopper	50	Amer. Car & Fdy.
	480	Auto	50	Pullman-Standard
	3,500	Box	50	Pullman-Standard
	150	Cov. hopper	70	Pullman-Standard
Spokane Intn'l.....	2	Cov. hopper	70	General American
Union Pacific.....	500	Auto	50	Amer. Car & Fdy.
	1,000	Hop. bal.	70	Amer. Car & Fdy.
	500	Box	50	General American
	289	Box	50	Pullman-Standard
Union R.R.....	359	Gondola.....	50	R. R. Shops
Virginian.....	500	Hop. bod.	55	R. R. Shops
	1,000	Hopper	55	R. R. Shops
Wabash.....	60	Cov. hopper	70	Amer. Car & Fdy.
	500	Box	50	Amer. Car & Fdy.
	18	Box	40	R. R. Shops
	20	Caboose	30	R. R. Shops
	118	Hopper	55	R. R. Shops
	600	Box	50	R. R. Shops
Western Maryland.....	15	Box bodies	30	Bethlehem Steel
	200	Box	50	Bethlehem Steel
	600	Hopper	55	Bethlehem Steel
Western Pacific.....	250	Box	50	Pressed Steel
Western of Alabama.....	50	Box	50	Pullman-Standard
Wheeling & Lake Erie.....	250	Box	50	Amer. Car & Fdy.
	1,000	Hopper	70	Greenville
	2	Air dump	50	Ralston

PRIVATE CAR LINES

Purchaser	No.	Type	Capacity tons	Builder
American Refrigerator Transit.....	900	Refrig.	40	General American
	900	Refrig.	40	Pullman-Standard
	200	Refrig.	40	Missouri Pacific Shops
	300	Refrig.	40	Company Shops
	150	Refrig.	40	Cudahy Packing
Fruit Growers Express.....	100	Refrig.	50	Company Shops
	1,000	Refrig.	40	Company Shops
Merchants Despatch Transportation.....	1,000	Refrig.	35	Despatch Shops
Northern Refrigerator Line.....	50	Refrig.	70	Despatch Shops
Pacific Fruit Express.....	1,000	Refrig.	40	Amer. Car & Fdy.
	1,000	Refrig.	40	General American
	1,000	Refrig.	40	Pacific Car & Fdy.
	1,000	Refrig.	40	Pressed Steel
	834	Refrig.	40	Pullman-Standard
	1	Refrig.	..	Company Shops
St. Louis Refrig.....	100	Refrig.	40	Company Shops
Wilson Car.....	38	Refrig.	40	Company Shops
Not available.....	11	Various	40	Amer. Car & Fdy.
	367	Cov. hopper	70	Amer. Car & Fdy.
	2,925	Tank	..	Amer. Car & Fdy.
	80	Hopper	..	Amer. Car & Fdy.
	70	Box	70	Amer. Car & Fdy.
	15	Gondola	70	Amer. Car & Fdy.
	45	Cov. hopper	..	General American
	2,015	Tank	..	General American
	100	Tank	..	Harlan & Hollingsworth
	6	Flat	..	Pressed Steel
	30	Various	70	Pressed Steel
	30	Box	50	Pullman-Standard

increase the monthly output to 10,000 freight cars. This will become effective, according to Senator Reed, "as soon as it can be put into operation," and is expected to reach the 10,000 goal in June. He emphasizes that this program is en-

tirely voluntary, and charges the C. P. A. with being "tragically unaware" of the existing situation. The small number of cars ordered during the first half of 1946 he explains, as due to hesitation by the railroads because of

Freight-Car Shortages, First 13 Weeks, All Freight Cars*

Weeks	1944	1945	1946	1947
1.....	3,551	5,053	5,428	16,290
2.....	5,045	8,198	5,896	17,962
3.....	6,497	11,499	8,535	21,449
4.....	6,950	12,818	11,060	23,979
5.....	7,926	14,309	9,631	28,254
6.....	7,212	15,433	9,488	29,735
7.....	6,465	16,649	9,209	31,718
8.....	5,303	19,157	7,003	33,890
9.....	3,618	18,123	7,205	36,183
10.....	2,051	18,415	5,395	36,698
11.....	1,379	19,397	5,643	36,930
12.....	1,005	18,779	3,361	36,804
13.....	658	18,514	3,767	33,099

* From Car Service Division, Form CS-44A.

Open-Top Freight-Car Shortages, First 13 Weeks*

Weeks	1944	1945	1946	1947
1.....	34	0	46	3,557
2.....	164	431	161	5,145
3.....	218	932	482	5,813
4.....	84	1,126	1,317	6,285
5.....	114	1,340	721	7,289
6.....	121	1,438	800	9,668
7.....	274	1,788	602	11,024
8.....	232	1,840	805	9,368
9.....	69	1,129	1,141	10,680
10.....	15	756	793	10,365
11.....	16	818	2,046	10,866
12.....	12	248	1,543	11,560
13.....	5	586	1,487	10,096

* From Car Service Division Form CS-44A.

Box-Car Shortages, First 13 Weeks*

Weeks	1944	1945	1946	1947
1.....	3,505	4,452	4,681	12,333
2.....	4,846	7,208	5,228	12,353
3.....	6,259	9,837	7,190	15,086
4.....	6,824	10,952	8,984	17,014
5.....	7,761	12,067	8,522	20,340
6.....	7,032	12,999	8,507	20,560
7.....	6,163	13,821	8,512	20,093
8.....	5,050	16,283	4,527	23,707
9.....	3,549	16,138	6,064	24,775
10.....	2,001	16,744	4,553	25,292
11.....	1,343	17,467	3,545	24,877
12.....	971	17,740	1,777	23,877
13.....	626	17,075	2,212	22,067

* From Car Service Division Form CS-44A.

the predictions of "fake economists" in Washington "who predicted a recession which didn't come."

165,000 Tons a Month?—At the same meeting, R. V. Fletcher, president of the A. A. R., reports that this organization had recently made representations to the Iron & Steel Institute urging greater allocation of steel for car building. As the result of the combined efforts of the railroads, O. D. T., and C. P. A., assurances were given early in February that 165,000 tons monthly would be allocated to the car builders and for repairing freight cars. This, he explains, was presumed to be sufficient to permit the construction of 7,000 freight cars a month and to take care of the necessary repairs. He says that doubts have arisen in the minds of railway officers as to whether as much as 165,000 tons of steel a month will be allocated for the construction and repair of railway equipment. It is his opinion that 7,000 cars a month is inadequate and that 4,600,000 tons of steel would have to be allocated yearly in order to build 10,000 new cars monthly and take care of needed maintenance. Freight cars are now being held out of service for months, he says, because fabricators of parts can't get steel. Judge Fletcher also shows that the railroads consumed an estimated 9.2 per cent of the steel produced in 1946. This, he says, included rail and track maintenance items in addition to that used for car construction and repairs. "According to our best judgment," he concludes, "the percentage should not be less than 11.5 if the railroads are to secure sufficient material to carry out a car-building and car-repair program which would materially relieve the present situation."

"We Can Do It if We Get the Steel."

—S. M. Felton, president of A. R. C. I., referring to the 10,000 car programs, says: "We can do it if we get the steel, and it looks as if we are going to get it," although he said there was still a shortage of materials used in the manufacture of component parts for freight cars, particularly wheels.

Looks Askance at New England.—In a statement during the week of March 8 Senator Reed says that the New England territory moved out 300 empty cars

for every 1,000 loaded cars it received. "There is no way this situation can be handled and the grain loading territory of the West protected against complete failure of car supply except that some of these cars be moved west empty."

New England Shippers Rally.—The New England shippers call a meeting for March 20 to discuss "government 'efficiency' which now orders 13,000 empty box cars out of New England each month, while New England factories close and curtail and New England workers are thrown out of work." The call was issued by William H. Day, chairman, New England Shippers' Advisory Board.

A Job for the Public.—In an address during the week of March 8 before the Rail Transportation Institute of the American University Colonel Johnson

Total Cars on Line, Class I Railroads*

March 15	Box	Open top	All freight cars
1944.....	732,996	840,075	1,988,914
1945.....	709,017	855,888	1,954,030
1946.....	725,350	832,032	1,919,008
1947.....	695,018	824,732	1,883,248

* Railroad and private cars. From A.A.R. Car Service Division, Form CS-60A.

says that more cars will be forthcoming if the American people make their demands for them sufficiently vociferous. He predicts that the railroads will soon be able to meet only 75 per cent of the demands on them for transportation. He doubts that freight-car production will reach the 10,000 level by August.

More Machinery.—A meeting of representatives of railroads, car lines, car builders, and specialty and component manufacturers called by Colonel Johnson was held in Washington March 13 and 14 for the purpose of "developing an aggressive program" for building new freight cars at the rate of 10,000 a month. The "task" committee which was organized represents all of these interests.

Railway Sights Lifted.—At a hearing before the I. C. C. on car service Judge Fletcher says that with more steel in sight for building freight cars the railroads have enlarged their programs for new car buying to a total of 131,000 cars. Such a program, he adds, would absorb all the steel available for freight-

car construction until at least the middle of 1948.

Kendall Encouraged.—In his monthly review of the national transportation situation Mr. Kendall reports "a number of encouraging developments" based primarily upon the prospect of increased steel deliveries. He reports, however, that the demand for cars of all types shows no indication of decreasing.

Doubts Creep in.—The O. D. T. is not entirely satisfied with recommendations by the so-called Industrial Advisory Committee for distribution of steel for freight cars calling for a pledge by the steel industry of approximately 151,000 tons, including component parts and specialties, for construction of 10,000 cars a month. This allocation, as set forth in a report on April 3, amounts to 210,000 tons, including 59,000 for repairs. It is 29,000 tons short of the 171,000 tons for new cars, plus 68,000 for repairs, recommended by the Car Builders' Production Committee. The builders ask for 17.1 tons per car; the steel industry would allow only 15.1 tons per car. Steel rollings for 10,000 cars a month, the report points out, will not be in full effect until July; the builders' requirements will be carried only until August rollings (for October car production) "because the builders' shipping schedules indicate a sharp decline after October from the 10,000-car level pending placement of additional orders in the car shops."

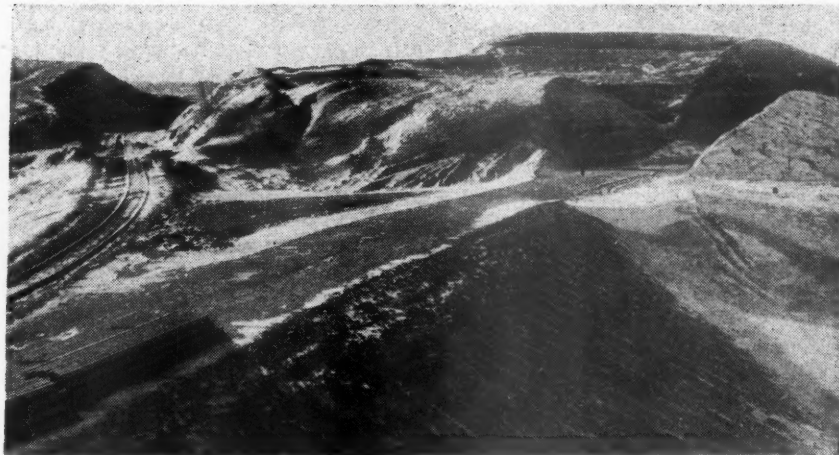
Faricy Goes to Bat.—In a telegram on April 12 William T. Faricy, president, A. A. R., answers a Los Angeles Times article of April 10 alleging an eastern conspiracy to halt development of the West through control of car movements by the A. A. R. The charge, he says, "was based on erroneous use of incomplete and partial statistics and a complete misunderstanding of normal car movements in today's traffic situation."

10,000 Cars a Month?—Addressing the April 25 meeting of the board of directors of the A. A. R., Colonel Johnson urges the roads to keep continuously on order twelve times the number of cars they hope to have delivered each month. He also says that there were firm orders for 97,000 cars and only

(Continued on page 1033)

Property-Betterment Programs Aim at "Super" Railroads

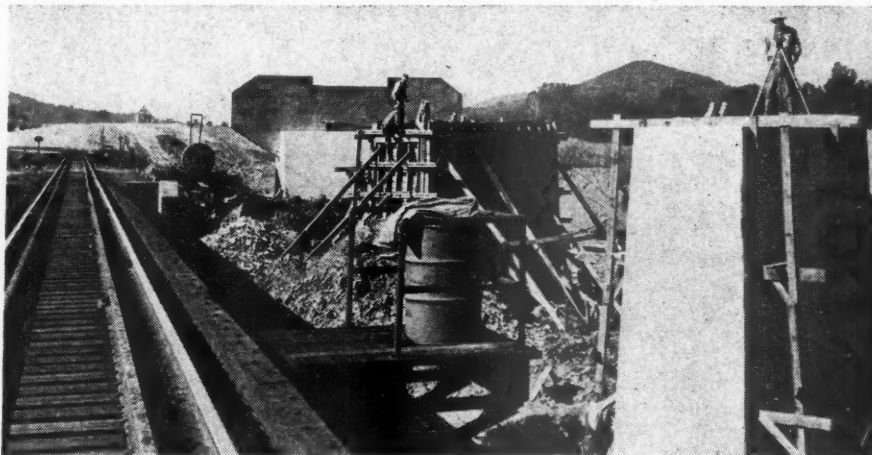
Improvements to the fixed plant, changes needed to speed freight service and to bring down operating costs are now going forward at an accelerated pace. This is a summary of the types of work involved, supplemented by pictures of specific jobs and pertinent information regarding each one



One of a number of line changes on the Northern Pacific that have as their purpose the reduction of grades and curvature. This project, at Fryberg, N. D., which called for 240,000 cu. yd. of grading, eliminated about 5,800 ft. of bad side-hill track with three curves of 4 deg. or more, and substituted a shorter line having only a 2-deg. curve

THE entire history of the railroads has been one of continual improvement of their fixed plants in the interest of better and more economical service. The rate of progress in this direction has had its ups and downs over the years, being relatively "up" during periods of high business activity and relatively "down" during depressions and wars, but nearly always the direction of movement has been forward.

At the present time improvements to the fixed properties are being made at a relatively high rate—higher, in fact, than at any time during the past 16



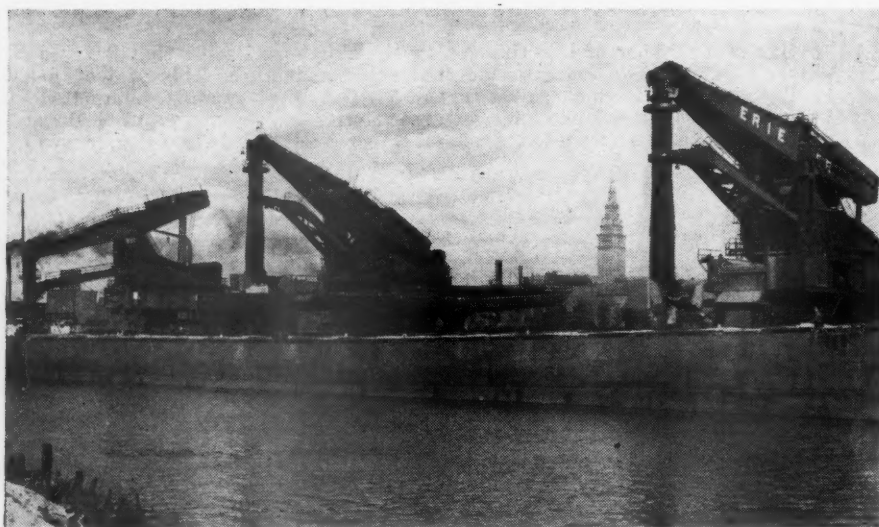
Work in progress on a new bridge required in connection with a line change project on the Cincinnati district of the Norfolk & Western. The purpose is to reduce the ruling grade against west-bound traffic from 1.14 per cent to 0.52 per cent in order to eliminate the necessity of "doubling" trains up this grade



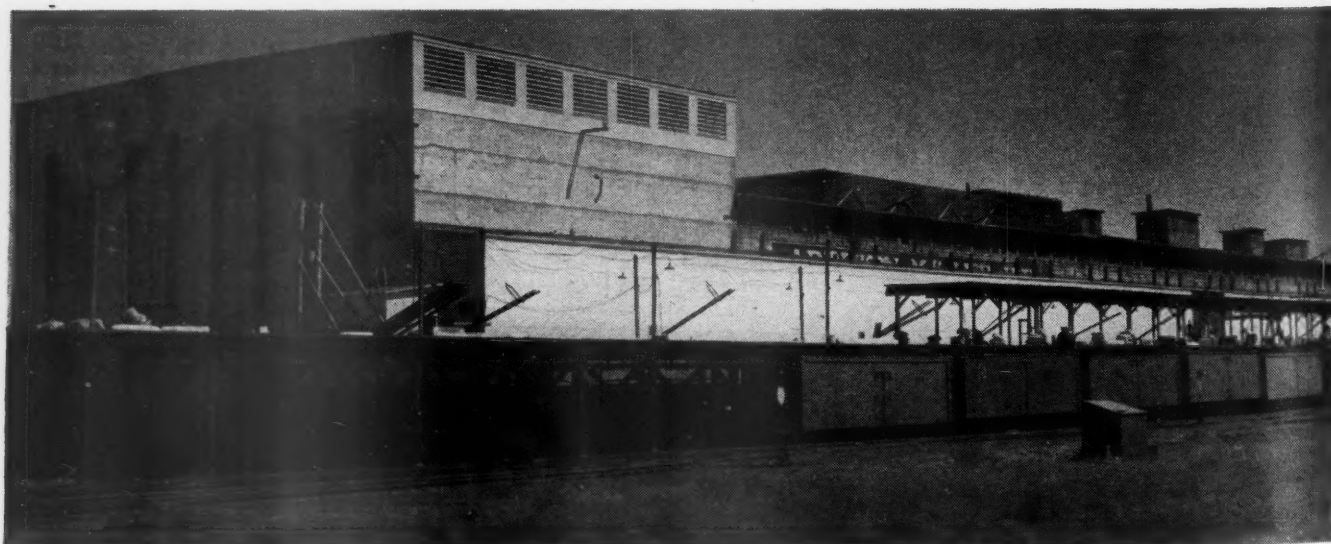
An important factor in making possible better service to shippers through higher train speeds and lower maintenance costs is the modern heavy-duty track construction now standard on many railroads. Here is shown a section of track on the Bessemer & Lake Erie laid with 152-lb. rail. It is held on this road that the use of such rail has resulted in a marked reduction in the number of man-hours required for track-maintenance purposes, and has produced many other benefits, including longer service life from ties and less wear and tear on equipment



This new freight house was built recently at Jefferson and Clinton streets, Chicago, by the Chicago, Milwaukee, St. Paul & Pacific to augment its capacity for serving the Chicago area. Of concrete, brick and steel construction, the structure is 50 ft. by 320 ft. in plan, has two stories and a basement, with offices on second floor



The ore-handling docks maintained by the Erie at Cleveland, Ohio, for unloading iron ore from lake vessels were recently subjected to a modernization program that included the construction of a new 17-ton Hulett unloader to augment two existing unloaders and to permit retirement of 40-year-old machinery



To permit better service to shippers of perishables this large car-icing plant on the Northern Pacific at Pasco, Wash., was recently enlarged by the addition of 100-tons-per-day ice-making machinery and by additional storage for 7,200 tons of ice

years. In 1946 gross capital expenditures for roadway and structures totaled \$242,940,000, a drop of 2 per cent below 1945, but greater than for any other year since 1931. An indication of what may be expected this year was given by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission in a recent issue of its "Monthly Comment," which reported that capital expenditures for road improvements in the first six months are expected to total \$129,084,000, up \$28,358,000, or 28.2 per cent, as compared with the first half of 1946.

In spite of the increased activity prevailing this year, the improvements now being made to the railroads' properties are only a fraction of what they would be if the carriers had unlimited investment funds at their disposal. Boiled down to its barest essentials, their problem, in so far as freight service is concerned, is to provide a fixed plant that will permit goods to be moved at such speeds and rates as will attract an adequate share of the available business, and at such costs (to the extent that the fixed plant is a factor in determining these costs) as will permit them to make a reasonable profit on their investment. When considered in their relationship to this problem, the tracks and structures of every railroad have certain weaknesses. The roads know what these weaknesses are, they know what has to be done to correct them, and they are doing these things as fast as they can within the limitations imposed by funds and other requirements.

The steps that the roads are taking to convert their properties into the "super" railroads that are seen as necessary to meet the challenge of the present and the future can be grouped broadly into three classifications. The first of

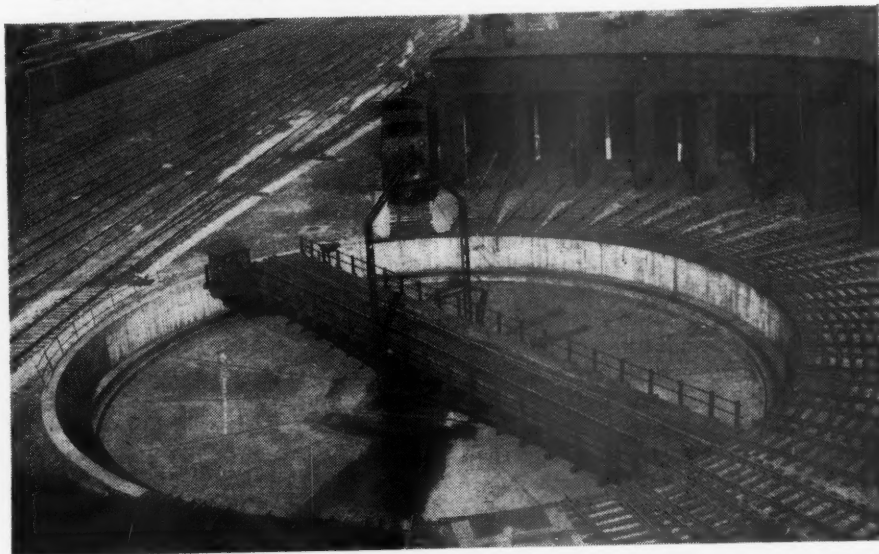
these—and the most important—includes all the work that must be done between terminals to overcome conditions that impose limitations on speeds or loads, or that result in unnecessarily high operating costs. As railroad men observe the great waste of motive power that is suffered in overcoming the resistance presented by heavy grades and curves, and the limitations on speed imposed by such obstacles, they are becoming increasingly curve and grade "conscious," a state of mind that is reflected in a mounting eagerness to make their lines as nearly straight and level as possible. That is why line changes, involving grade reduction or curve elimination, or both, are looming as such an important factor in the present and future plans of the railroads for improving their properties.

Lessen Need of Restrictions

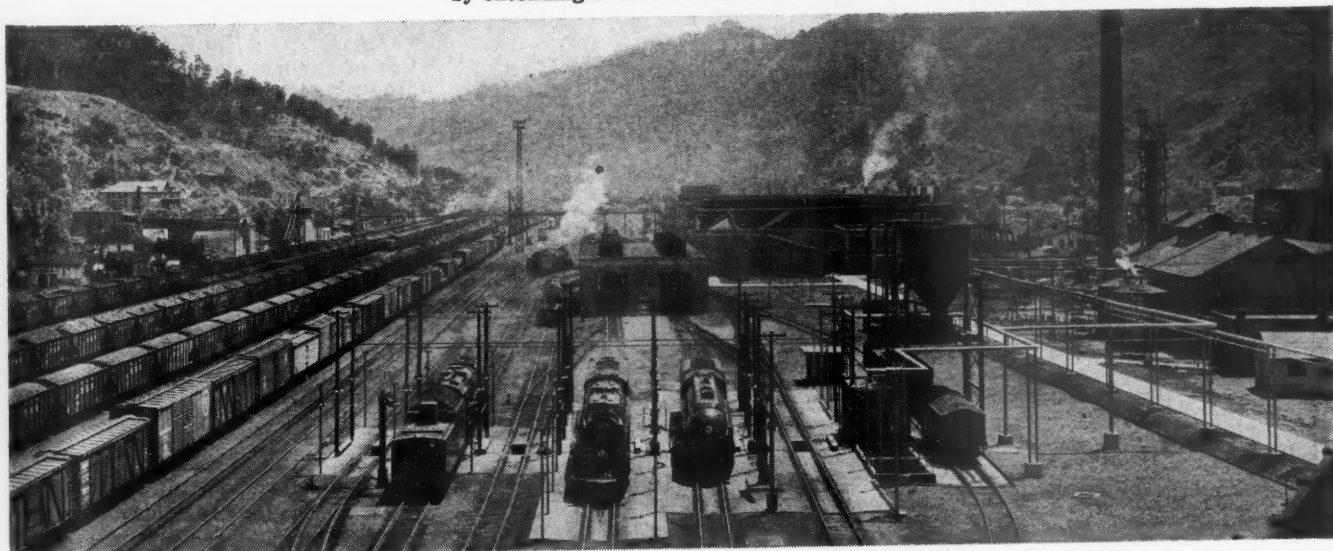
Another important class of work that is being carried out to remove limitations on loads and speeds between terminals is the reconstruction or strengthening of bridges, the load ratings of which are such as to impose speed restrictions or to preclude the use of heavier locomotives, with the larger tonnages (at consequent lower costs) that they are able to handle. During the war such work was limited by lack of steel and by other restrictions, and the activity now noticeable in this field indicates that the railroads are endeavoring to make up for lost time. A somewhat related class of work is that involving the enlargement or elimination of tunnels, the latter by either daylighting the existing bore or by changing the line. The purpose of this work is either to enlarge clearances to permit the passage of larger locomotives or



To replace a 60-year-old bridge across the Kanawha river at Point Pleasant, W. Va., that was inadequate for both present-day freight cars and locomotives, the Baltimore & Ohio built this \$2,000,000 modern bridge which was formally dedicated on May 10. This view shows the new 480-ft. span over the main channel, with the old cantilever span in the background. The falsework used in erecting the bridge is still in place



Incident to placing Diesel power in freight service on its main line the Erie had to lengthen this turntable at Salamanca, N. Y., to permit the turning of larger steam locomotives. The old table, 80 ft. long, was replaced by a 105-ft. structure formed by extending a 90-ft. secondhand unit at the ends and making certain other changes



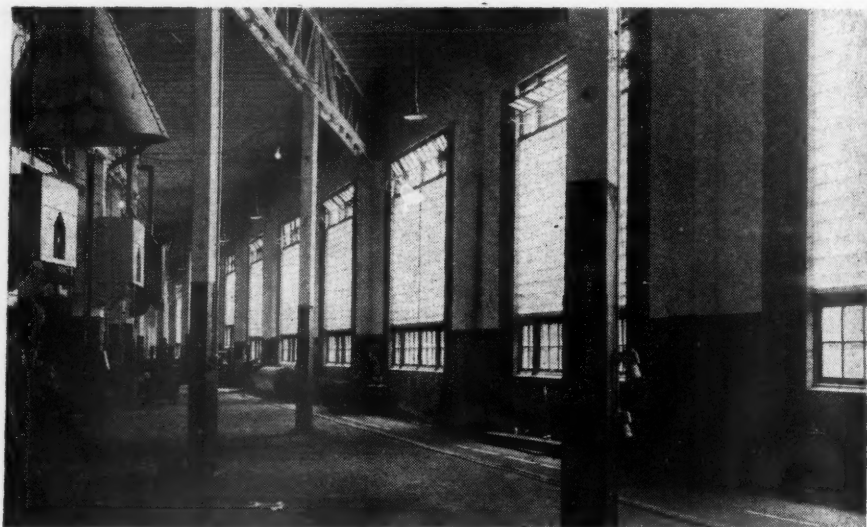
The Norfolk & Western is saving about 350 engine-days a year as the result of faster turn-arounds made possible by the modernization of its engine terminal at Williamson, W. Va. This view of the improved layout shows new servicing facilities in foreground



Tunnel-elimination work is a relatively common sight these days. Here work is getting started on a deep cut to replace the Mason tunnel of the Chesapeake & Ohio near Clifton Forge, Va.

loads, or to provide an additional track, in which event a second tunnel to supplement the first is sometimes constructed.

Also in the class of work done to permit higher speeds and to reduce operating costs generally is any measure that results in better and stronger track, such as the installation of heavier rail and fastenings, longer or more closely-spaced ties, a deeper and cleaner ballast section, or the stabilization of the roadbed through drainage, grouting or other means. Many railroads feel that their tracks, at least on the heavy-traffic lines, have been brought up to the desired standards in these respects; others are in the midst of programs to this end; and still others are just now making a start.



Interior of remodeled enginehouse at Argentine, Kan., characterized by the illumination afforded by glass-block panels in the outer wall. A total of 32,945 steam and 9,758 Diesel-electric locomotives were handled at this enginehouse in 1945, averaging 118 per day



One of the measures that the railroads are using to stabilize soft track, and thereby to reduce maintenance and operating costs, is pressure grouting the roadbed with sand-cement mixes, sometimes with asphalt or other materials added. First tried only a few years ago, the practice is now being used by many railroads with resulting substantial savings in maintenance costs. This view shows a roadbed grouting crew working on the heavy-traffic line of the Atchison, Topeka & Santa Fe between Holliday, Kan., and Emporia. Pneumatic hammers drive "bull points"

minals or other points in the interest of better service for the shipper. The modern freight house, embodying up-to-date construction and all the elements of design that have been developed for facilitating the handling of merchandise, is a

The second broad classification of improvements that are constantly being made by the railroads in order to better their freight service embraces those that are made at terminals and certain intermediate points. Prominent among them are yard improvement projects designed to expedite the handling of cars through terminals. Such projects may range from the mere lengthening of tracks to avoid doubling trains on arrival, to the complete revamping of a yard to increase its efficiency, possibly including the provision of a gravity classification yard with car retarders, power-operated switches, advanced communication systems and all the other accoutrements of the modern yard.

The modernization of existing freight houses, or the construction of new facilities of this type to replace old ones or to provide additional capacity, is another class of work performed at ter-

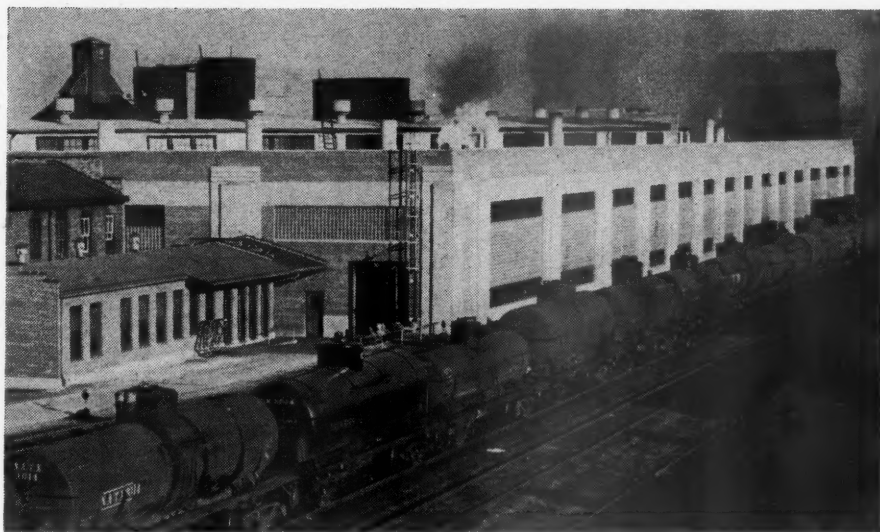
far cry indeed from the old frame structure that is still the rule rather than the exception. That the railroads recognize the inadequacy of these older structures is evidenced by the substantial amount of modernization and reconstruction work that is now under way or is planned.

A tremendous amount of perishable traffic is handled by the railroads in refrigerator cars and the expeditious icing and re-icing of these cars en route is a problem that is being met by improvements to existing installations designed to increase their capacity, or, occasionally, by the construction of entirely new layouts. The modern car-icing plant is a highly-mechanized installation with plenty of platform space to handle as many cars as may be necessary in a minimum of time, and such plants have been an important factor in making it possible for the railroads to expedite the movement of perishables and to deliver them in excellent condition.

Also included among the improvements that are made to expedite the handling of cars or particular commodities are those that are made at points where goods are transferred from ships to cars, or vice versa. Included among these are coal and ore-handling facilities at Great Lakes and coastal ports, such as car dumpers and ore unloaders, and a number of installations of this type are now being made which embody the latest equipment designed for this purpose. Also embraced in this category of undertakings are those looking to the provision of better or larger facilities for handling merchandise between rail heads and cargo vessels, such as the project that the Norfolk & Western is now carrying out at Lambert Point, Va., involving the construction of an entirely new merchandise pier of unusual size and capacity.

Mechanical Facilities

The last of the three broad classifications of improvement work is that involving the facilities that are provided for servicing and repairing locomotives and cars. It is true that some of these facilities exercise only an indirect influence on the nature and cost of freight service, but they are, nevertheless, an important factor to be considered. Probably the greatest activity in this field at present is that incident to the provision of servicing facilities and repair shops for handling the rapidly-increasing number of Diesel-electric locomotives that are now being acquired. Such locomotives are recognized as an important factor in the railroads' plans for improved freight service, and the maximum benefits from them can only be realized by providing repair and servicing facilities designed especially to



When the use of longer locomotives made it necessary for the Santa Fe to lengthen some of the stalls in its enginehouse at Argentine, Kan., this was accomplished by remodeling part of the structure in such a manner as to give it a square effect

meet the peculiar requirements of this type of power.

While Diesel power is definitely in the ascendancy, the major portion of all freight traffic is still handled by steam locomotives. Consequently, in the interest of maximum utilization of steam power, there is constant need for the railroads to make improvements in shops, engine terminals and servicing facilities as may be required by changes in operating conditions or other factors. Larger power is still being introduced into new territories, requiring that turntables be lengthened and enginehouses extended.

A certain amount of improvement work at engine terminals is also being done to speed the handling of lo-

comotives and reduce "turn-around" time. Likewise, improvements in coal, water and cinder-handling plants, both at terminals and at intermediate points, are still a frequent occurrence.

Finally, in the category of improved mechanical facilities is work that roads are doing in the way of expanding or modernizing their shops for repairing or building freight cars, this being a phase of activity that is particularly appropriate at the present time in view of the acute shortage of freight cars.

The foregoing is merely an outline of the types of property improvements being emphasized on the railroads today. The photographs supplement this outline by depicting the variety, scope and magnitude of these improvements.

Freight Car Program Gets Slow Start

(Continued from page 1028)

1,878 freight cars were built during the first 18 days of April.

Politics Still Hot.—Congressmen from west of the Mississippi met in "emergency caucus" on April 28 to listen to Representative King (D) of California discuss "one of the most alarming situations ever uncovered respecting railroad manipulation to the detriment of the entire West," a report which was prepared by the author of the Los Angeles Times article. Again, Mr. Faricy replies promptly.

Sectional Politics.—A resolution is introduced in the Senate by Senator Downey (D) of California for himself and Senators Magnuson of Washington, McFarland of Arizona, and Johnson of Colorado, all Democrats, calling for an

investigation of the freight-car situation by the Senate interstate and foreign commerce committee. The resolution would direct the committee, among other things, to make a study of the authority and administrative policies of the C. S. D. in the distribution of freight cars to serve the commerce and industries of the Pacific Coast and Rocky Mountain states, including any contiguous states affected by the current car shortage.

Results of First Quarter

The first quarter of 1947 is past. According to reports from the American Railway Car Institute, it produced orders for 9,905 freight cars for car builders and railway shops during January, 13,729 during February, and 12,049 during March. Deliveries were 2,982 in January, 2,293 in February, and 2,883 in March.

Machine Age Comes to "Paper Work"

Customers gain faster and more dependable freight service, plus more attention from a relieved staff, by reason of widening applications of new and improved office machines and appliances

PAPER work is a necessary ingredient of any business and, because of government regulations and inter-carrier accounting, it is especially complex and onerous on the railroads to the extent that it steals the time of railroad officers, supervisors and employees from the carriers' actual business of moving the goods, and thus is inimical to the interests of the railroads' customers. Hence, improvement in the manner of getting overall paper work done by mechanization, in addition to the obvious benefits of lesser cost and fewer man-hours, brings with it two results of great significance to shippers: (1) By speeding up desk operations in freight offices, freighthouses and yards, it accelerates the actual release and movement of shipments; (2) by centralizing and simplifying auditing and accounting procedures, mechanization relieves those

railroaders who work directly with shippers—such as local agents, billing clerks and yardmasters—of many time-consuming tasks which prevent them from devoting as much time to the railroads' customers as is desirable.

It may be stated, then, that the mechanization of desk work which is sweeping the country's railroads means to the shipper directly, faster movement of his goods, and indirectly, more personal attention from the railroad staff.

A major influence in the recent rapid extension of machine clerking and accounting on the railroads has been, in part, the work performed by special committees established by numerous railroads to study office procedures with a view to consolidating or eliminating all extraneous paper work, and the installation of office machines wherever

possible. In addition the subcommittee on accounting and statistics sponsored by the Association of American Railroads, as well as the Finance, Accounting, Taxation and Valuation Department of the A. A. R., have played an important part in laying the groundwork for this speedup of paper work. The labors of these groups have brought about revolutionary changes in railroad desk work, which, in turn, have depended upon the development and availability of new and improved machines for the jobs at hand. Although office equipment manufacturers as a whole encountered far fewer obstacles than some other industries during the war-peace reconversion period, they were, nevertheless, somewhat restricted due to material shortages and labor strife.

The railways are constantly studying their freight station organizations and

The use of electric accounting machines has expanded widely during recent years



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operations, striving to find faster, more accurate and less expensive ways of doing paper work and handling freight. It is realized that, without a reorganization of the work itself, even the full utilization of machines will not produce the desired results. To this end some roads, through a revision of their bill of lading, shipping order, waybill, station record and delivery receipt forms, have been able to eliminate many costly delays to shipments and have also lessened errors. This was accomplished through the use of a form which permits all the required records to be made when the original bill of lading is made.

The installation of electromatic typewriters at billing points is a typical illustration of the many ways in which modern office equipment is benefiting both the shipper and the railroads. Capable of making as many as twenty copies of waybill-freight forms at one time, these machines avoid the necessity of typing the same form several times to secure the required number of copies, and at the same time assure neat appearance and legibility of all parts of the forms.

Photographing Waybills

One of the major changes in the handling of freight waybills has been the widespread adoption of photography for

filming these forms to avoid holding trains while clerks take off, by hand or typewriter, essential accounting information contained on them. The pinch of labor shortages during the war years

accelerated the adoption of this method, and today most of the carriers are using photography for numerous accounting purposes.

Several types of equipment are being used for this purpose, but microfilming and Dexigraph equipment are the most common on the railroads. Microfilming involves the reduction of original paper documents to film miniatures which, on being developed, can be enlarged many times on translucent screens, or as facsimile prints. The Dexigraph method features the use of a camera similar in operation to the ordinary camera used by the amateur photographer in that pictures are taken by reflected light passing through a prism and lens directly to sensitized paper.

Both of these methods have proved successful in processing waybills and in the preparation of junction passing reports. Prior to their adoption, clerks in origin yard offices were required to hold trains until all waybills could be reproduced manually, either by hand or by typewriter. Under the photographic plan the waybills are photographed—the train departs on schedule and the necessary reports are made from the photographic copies.

The utilization of Remington-Rand electric bookkeeping machines at their larger agencies is making it possible for the railroads to furnish their customers daily statements of charges and credits, and at the same time to accumulate, on a daily basis, the total debit of the agency.



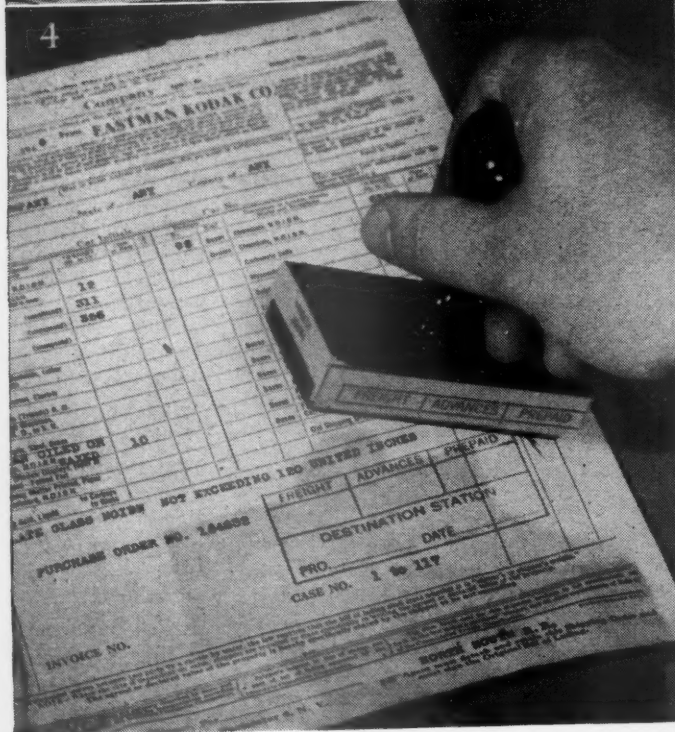
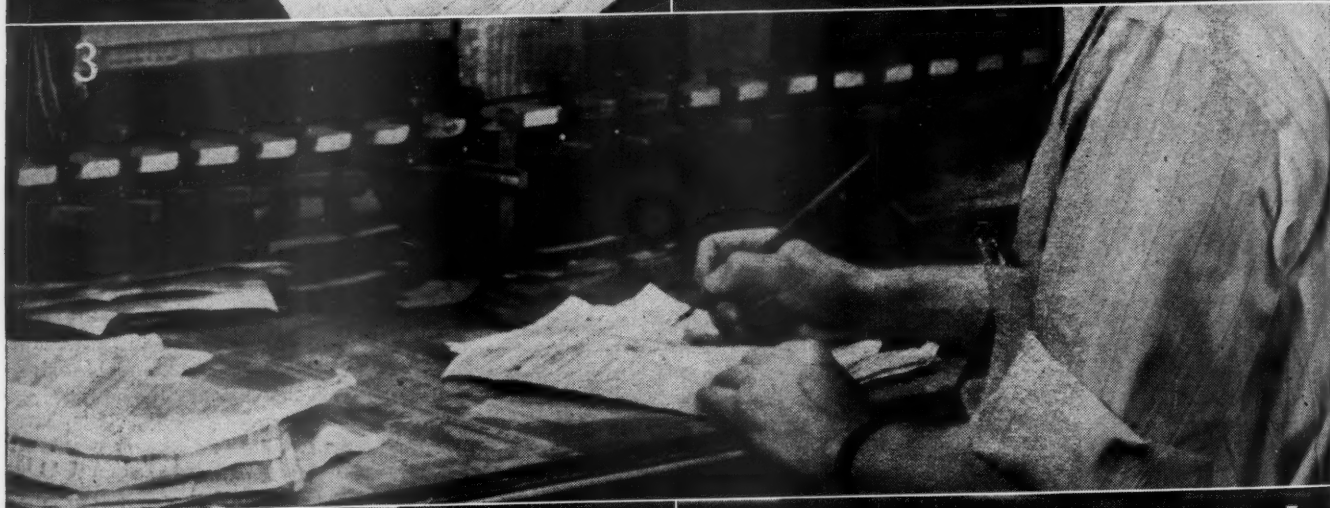
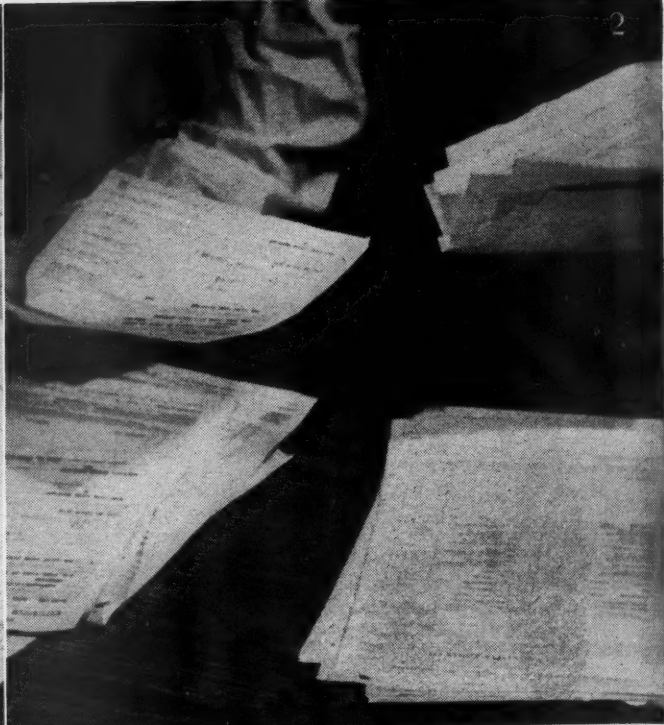
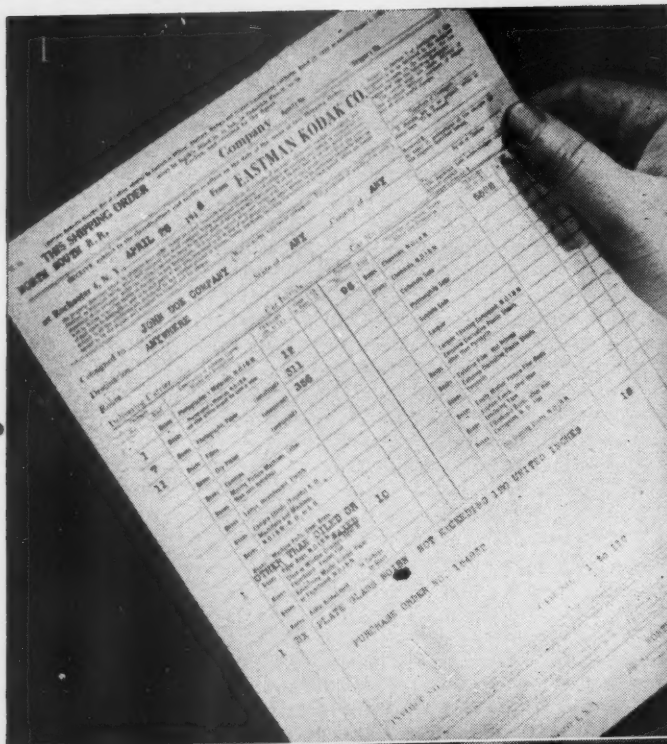
Photograph courtesy of Remington-Rand

Battery of Multisorts used for sorting waybills prior to their being filed in permanent files



Photograph courtesy of Remington-Rand

Visible control systems are used extensively in recording freight shipments as well as rates and other data frequently requested by shippers



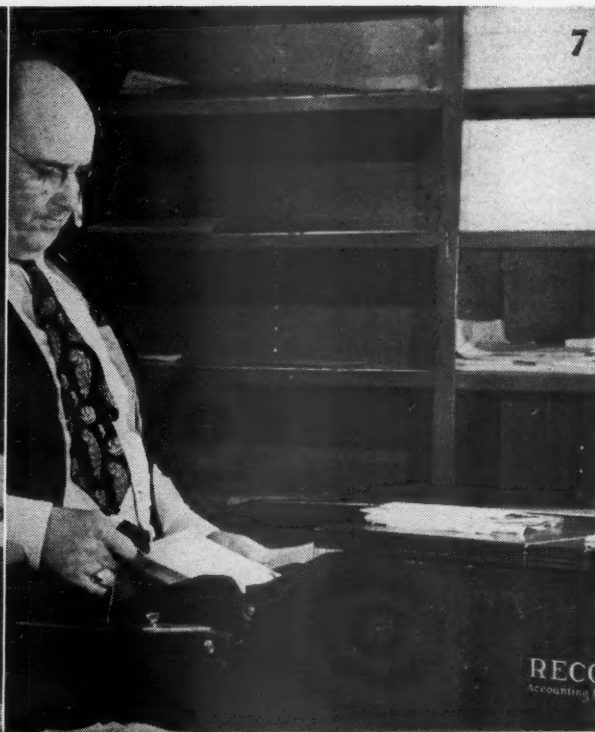
Eliminating Traffic L.C.

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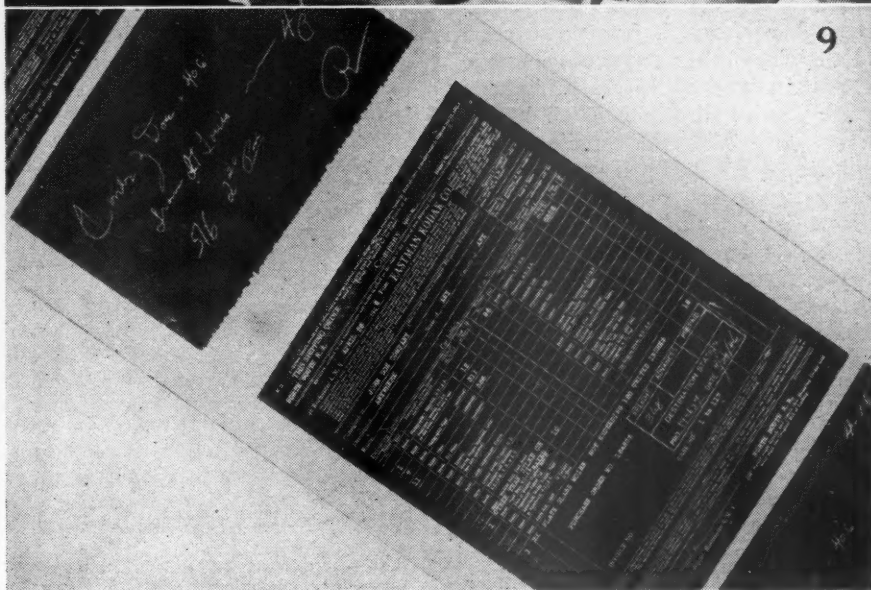
Railway



Eliminating Manual Transcription in L.C.L. Billing

Through the use of photography the original shipping order for local collect, less-carload shipments can be used as the waybill, thereby eliminating the necessity for typing the waybill forms.

(1) Shipping order is tendered to the carrier by the shipper. (2) After the shipments are checked into the cars, the billing department sorts the shipping orders by interline and local shipments. (3) Rating bureau checks, rates and computes charges on local collect shipments. (4) Shipping orders are next stamped with an imprint box which has spaces for the date, waybill number, freight charges and originating station. (5) After the charges are extended on the shipping orders, local collect items are sorted alphabetically by destination station, or by block or route number. Upon completion of this step the shipping orders have been transformed into waybills—containing all the information that the destination agent will require—and in the shippers' own terms. (6) Next, the shipping order "waybills" receive a waybill number. (7) All the local collect shipping order waybills, along with the prepaid freight bills, are photographed in the procedure. (8) Upon completion of the photographing the waybills are sorted by block or route number, ready for pouching and dispatching. (9) The film image of the shipping order is an exact photographic reproduction of the original document, giving the originating station a complete and compact record for tracing shipments and for accounting purposes.



Photographs courtesy of Recordak Corporation



Photograph courtesy of Remington-Rand

Photographing local l. c. l. shipping orders prior to train departure has eliminated much of the rush—thereby reducing clerical errors and affording shippers more efficient service

Through the use of modern high-speed tabulating machines numerous roads have found it possible to reduce to a minimum the amount of paper work required at agency offices. Still another move in this direction which has had a profound effect in speeding freight shipments is the policy adopted by many roads of transferring as much accounting work as possible to the audit office in order to permit the agent and his staff more time to attend to the business of serving the shipping public. Under this plan, freight agents are required only to prepare freight bills, collect charges and render reports in the simplest form. The reports, in many instances, call for only the freight bill number and the amount of the charges. From these data, reports and accompanying documents in the audit office are card-punched by means of electrically operated machines and all vital in-

formation is inserted thereon. This information includes the necessary detail to maintain accurate control of the agency accounts, to render interline settlements and to prepare statistical reports required by federal and state regulatory bodies.

Until recently the accounting departments of most lines required that a written abstract of each interline shipment be made, both on receipt from, and on delivery to connecting lines, in order to be able to check revenue settlements. Many roads have recently revised this practice. Abstracts of interline waybills on shipments weighing less than 5,000 lb. have been eliminated entirely, while on other shipments it has been found that a passing report, made either at on-coming or off-going junctions, serves as well as reports made at both points.

Among the other major items installed by the railroads in their programs designed to expedite freight shipments are high-speed automatic bookkeeping machines, such as duplicating key punch machines, which permit the operator to strike the keys and automatically punch the desired information, in code, onto the cards. Other devices include addressing, duplicating, tabulating and calculating machines. For sorting waybills and other forms, Multi-sort equipment, which permits speedy sorting and reference, has been installed. Kardex visible control systems are also playing an important part in improved freight service by providing ready reference for all freight shipments. These units, small in size and utilizing a system of colored code markers, have speeded record handling materially and



An important part of the extensive program of the railways designed to expedite paper work includes the installation of modern high-speed calculators

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their use is being constantly expanded to cover additional phases of paper work.

Teletype Speeds Departures

While teletype is not a new addition to the railway field, it has, nevertheless, made rapid advances during the last 20 years and its use is being constantly extended to provide more up-to-the-minute information regarding train arrivals and departures, consists, and other information necessary to provide efficient service for shippers. Equipped with teletype, numerous roads can release cars without waiting for billing, and at the same time, insure that the cars do not arrive at destination ahead of the billing information. In the case of long-distance cars, the bills are forwarded either by company or United States mail in passenger trains but, in the case of overnight merchandise cars, which are dispatched in this manner, the waybill information is teletyped to the destination agents hours ahead of their receipt of the cars. In either case, station forces at the points of origin are enabled to work in an orderly manner, without the necessity of undue haste and consequent possibility of errors, while employees at the destinations can have the freight bills, delivery receipts and handling instructions prepared in advance to permit the immediate working of the cars upon their arrival.

On one western road, which has overnight (13-hr.) service between two



Photograph courtesy Westinghouse Electric & Manufacturing Co.

Modern lighting fixtures not only improve office appearance, but also lessen eye strain and provide greater employee comfort

cities 500 mi. apart, usually 800 to 900 waybills are required to cover the shipments on each train. All the information on the waybills is teletyped to destination on teletype machines, either by direct transmission or later as circuits become available.

The teletype machines used in these operations have keyboards similar to a

billing typewriter and operators at the sending station type from the bill of lading directly onto a fanfold waybill-freight bill form, fitting the typing to the spaces on the form, and printing in several parts with one-time carbon paper between each part. At the destination point, similar teletype machines receive this data and automatically type it on similar fanfold waybills-freight bill forms.

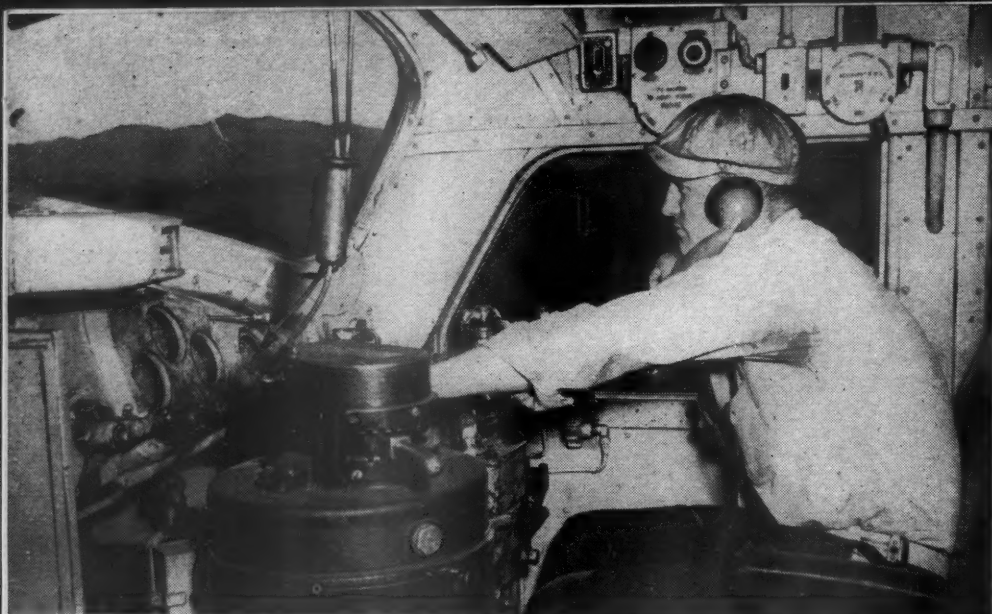
By this method, with all the necessary waybills and freight bills on hand at destinations, manifests are prepared in advance of train arrival for checking and unloading purposes, and distribution of shipments can proceed immediately upon train arrival.

In addition to the on-line teletype systems, many roads have installed teletype machines in their off-line traffic offices so that pertinent information may be furnished these offices regarding shipments. In this manner shippers are advised quickly as to the movement of their shipments.

In addition to the foregoing equipment being employed by the railroads to expedite freight shipments, many other improvements to this end, which, by themselves, seem relatively unimportant, are playing a significant part in helping the carriers provide improved freight service. Included among them are the installation of modern lighting fixtures, acoustical ceilings, posture chairs, tariff files with guides, rate desks with tariff file drawers, and bill form cabinets.



Speed-up of freight service has required the installation and expansion of communication systems, such as in this sending and receiving teletype station



Engineer on a "Flying Ute" through freight train on the Denver & Rio Grande Western between Denver, Colo., and Salt Lake City, Utah, using the train communication apparatus to talk with his conductor

New Communication Facilities Help to Keep Freight Moving

More and better telephone and printing telegraph service is available to expedite traffic because railroads are utilizing modern carrier, radio and other electronic devices

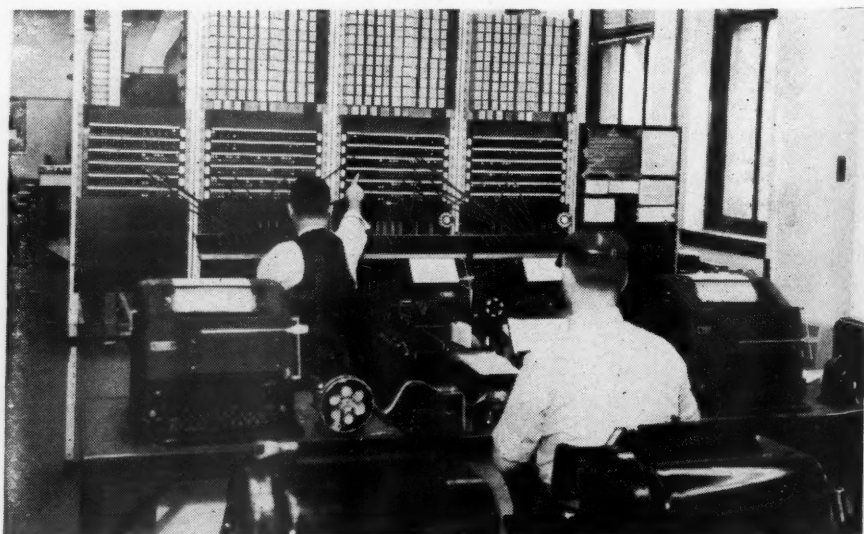
PPROMPT communications by telephone, printing telegraph, radio, walkie-talkies and sound systems are important aids in providing information to shippers as well as in expediting trains on the road, cars in the yards, and less-than-carload shipments in freighthouses. In these fields of communication between railroad offices, many forms of new apparatus, such as carrier on wires, beamed radio, and through switching of printing telegraph have been developed rapidly and installed extensively during the last year. In addition, the installation of systems for communication between the head end and rear of freight trains, as well as between trains and wayside offices, has now been effected on a large scale. These and other new systems of communication are used also in yards and terminals. For the most part, these new facilities were developed and installed to expedite freight traffic, and thus their wide employment forms an important chapter in the story of freight progress.

Carrier Is Wired Wireless

Nowadays when a shipper or consignee wants information concerning rates, routing of cars, reconsignments or the location of a car en route, the

railroads can give an answer more promptly than ever before, because more telephone and printing telegraph facilities are available. This is a result primarily of the development and recent extensive application of wired wireless, properly known as carrier. This system

is different from radio in that the high frequencies are applied to line-wire circuits rather than being broadcast. Thus with carrier, one line-wire circuit on a pole line between cities carries several telephone conversations or printing telegraph messages at the same time. Last



This modern telegraph office on the Pennsylvania in Chicago includes printing telegraph machines, and a switchboard by which printers in 13 cities can be connected to work through without repeating, thus providing information for the shipper more promptly

year the railroads of the United States and Canada installed carrier to establish 26,170 mi. of long-distance telephone circuits and 47,497 mi. of printing telegraph.

These facilities are used in numerous ways to expedite the shippers' freight. For example, when a freight train leaves a yard, printing telegraph is used to send a list of the cars, ladings and destinations to the terminals ahead. Thus the shippers and consignees can be advised of the progress of their shipments in transit and, prior to arrival, the yardmasters can plan the switching of the train to deliver cars to consignees or to make the cars up into trains for further road movement to destinations. A few minutes here and a few minutes there, on a transcontinental movement, help to



Above—A Kansas City Southern train departing from yard near Kansas City, Mo., for a run over train-communication territory to New Orleans, La:



Left—The conductor in a caboose on a Pennsylvania freight train can use the trainphone equipment to converse with the engineer or with wayside operators

the vicinity of the caboose and the locomotive of a train, as well as in the reverse direction, or between trains and wayside offices.

During World War II the development of radio equipment to operate at very high frequencies made more radio channels available, and more recently the Federal Communications Commission assigned 60 channels for railroad use. Accordingly, during the past year, many railroads have made tests, and several have made extensive permanent installations, of radio train communication. Also, the inductive system, which

get the car there "Thursday morning" instead of "some time Friday."

Radio, as well as the inductive system, is now being used for communication on and with moving trains. More than 25 years ago the railroads demonstrated that radio could be used for communication on trains, but, within the ranges of frequencies then used, none were available for permanent assignment to railroads. This situation, in part, led to the development of the inductive system of train communication which, in some respects, is similar to the carrier system previously discussed, in that the wires on pole lines aid in carrying the high frequencies between

Right—In a yard at Birmingham, Ala., the Southern has installed talk-back loudspeakers connected to a control panel in the yardmaster's office in an elevated tower so that he has direct communication with crews in all parts of the yard





The Missouri Pacific has expedited movement of freight through a large freight-house in Kansas City by installing 40 loud-speakers and 22 telephones, all connected to three offices. View shows a loud-speaker on the beam overhead

has been perfected by more than 15 years of development, has been applied on several roads. Including radio and inductive systems, the installations in service, together with those under construction, are on 14 railroads, including the Bessemer & Lake Erie, the Kansas City Southern, the Pennsylvania, the Burlington, the New York Central, the Rio Grande, the Santa Fe, the Rock Island, the Milwaukee, the Pere Marquette, the Atlantic Coast Line, the Missouri Pacific, and the Duluth, Missabe & Iron Range. These projects include train communication on more than 3,000 mi. of road, involving about 360 locomotives, 151 cabooses and 90 wayside offices.

These installations are demonstrating, under varied operating conditions, the ways in which train communication saves time for the shippers' freight. With either the space radio or the inductive system as applied on freight trains, the engineer in the locomotive and the conductor in the caboose can carry on a conversation. Furthermore, the same form of communication is available between trains or between trains and wayside offices. Walkie-talkie sets are available for use by trainmen when inspecting trains or when going back to provide flag protection.

During the operation of a train over a district of approximately 100 mi., there are numerous instances in which the train communication saves 10 to 20 min. otherwise required for the conductor to walk to the front end of the train and back to the caboose. Instead of passing hand signals from the caboose

to the engineer to give him instructions, this is done by the trainphone. Unexpected causes of delay, such as hotboxes and broken couplings, are corrected in much less time. Therefore, this new facility results in improved service to shippers because it helps to save the time of freight trains on the road.

In Yards Also

Also in terminal areas and yards, radio or the inductive system is being used for communication between offices and locomotives. For example, in the Chicago switching district the Burlington has 19 locomotives and three yard offices equipped with radio. Similar radio installations are in service in terminal areas on the Santa Fe and the Union Pacific at Kansas City, Mo., and on the Southern Pacific at San Francisco, Cal. Dozens of times each day this new system of communication makes it possible for the railroads to serve the public better by delivering a loaded car or spotting an empty car for loading sooner than otherwise would be possible.

In 15 freight classification yards on the Burlington, the Pennsylvania, the Louisville & Nashville and other roads, the inductive system is being used for communication between an office and the locomotive that pushes cars over the hump from which they drift by gravity down into the classification tracks. Other roads, such as the Baltimore & Ohio, the Seaboard, the New York Central and the Boston & Maine, are using space radio in similar service. Again

modern communication equipment saves a few minutes here and there, to the end that trains are made up and depart sooner.

Portable pack sets, also known as walkie-talkies, are used on several railroads. For example, in one yard on the Rock Island when a train is assembled ready for departure, a yard clerk with a walkie-talkie goes along the train from the head end to rear, reading the initials and numbers of the cars. This information goes by radio through his set to a receiving set in the yard office where an automatic voice-recording device makes a record. By "playing" this record, a clerk can quickly type the train list on a printing telegraph sending machine which not only makes typewritten lists but simultaneously transmits the train list to yard offices and destinations ahead. This use of the walkie-talkie saves delay in the departure of trains.

In large flat yards the operations ordinarily require that the yardmaster communicate frequently with the conductors or foreman in charge of the yard crews. Accordingly, within the past year or so, the so-called sound system has been developed in which talk-back loud-speakers, located at various places in the yard, are connected to the yardmaster's office in a high tower where he can observe the operations of the entire yard. By means of his control panel and microphone he can call a foreman on



The train communication system on the Pennsylvania, between Harrisburg, Pa., and Pittsburgh, includes carryphones, a new walkie-talkie portable telephone, by means of which the conductor of a freight train can inspect his train and at the same time keep in touch with his engineer, with the crews of other trains in the area, and with wayside control towers up to 15 mi. distant

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any of the loud-speakers, and the foreman, if within 50 ft. of the speaker, can talk back through the same speaker to the yardmaster. Thus the yardmaster exercises direct supervision over all the switching under way in the yard, with the result that trains are more efficiently made up to depart on schedule and may take cars that otherwise might be left behind. This talk-back loud-speaker system of communication has been developed and installed during the past year at several large yards, for example, at Birmingham, Ala., and Atlanta, Ga., on the Southern, at Salt Lake City, Utah, on the Rio Grande, and at Louisville, Ky., on the Kentucky & Indiana Terminal.

Less-than-carload shipments of freight are now being expedited through freight-houses with the aid of modern electronic communication equipment, such as loud-speaker sound systems and special telephones. For example, in a freight-house



Above—As a means for expediting services to shippers and consignees in the Chicago district, the Burlington has installed radio on 19 switcher locomotives and in three yardmasters' offices



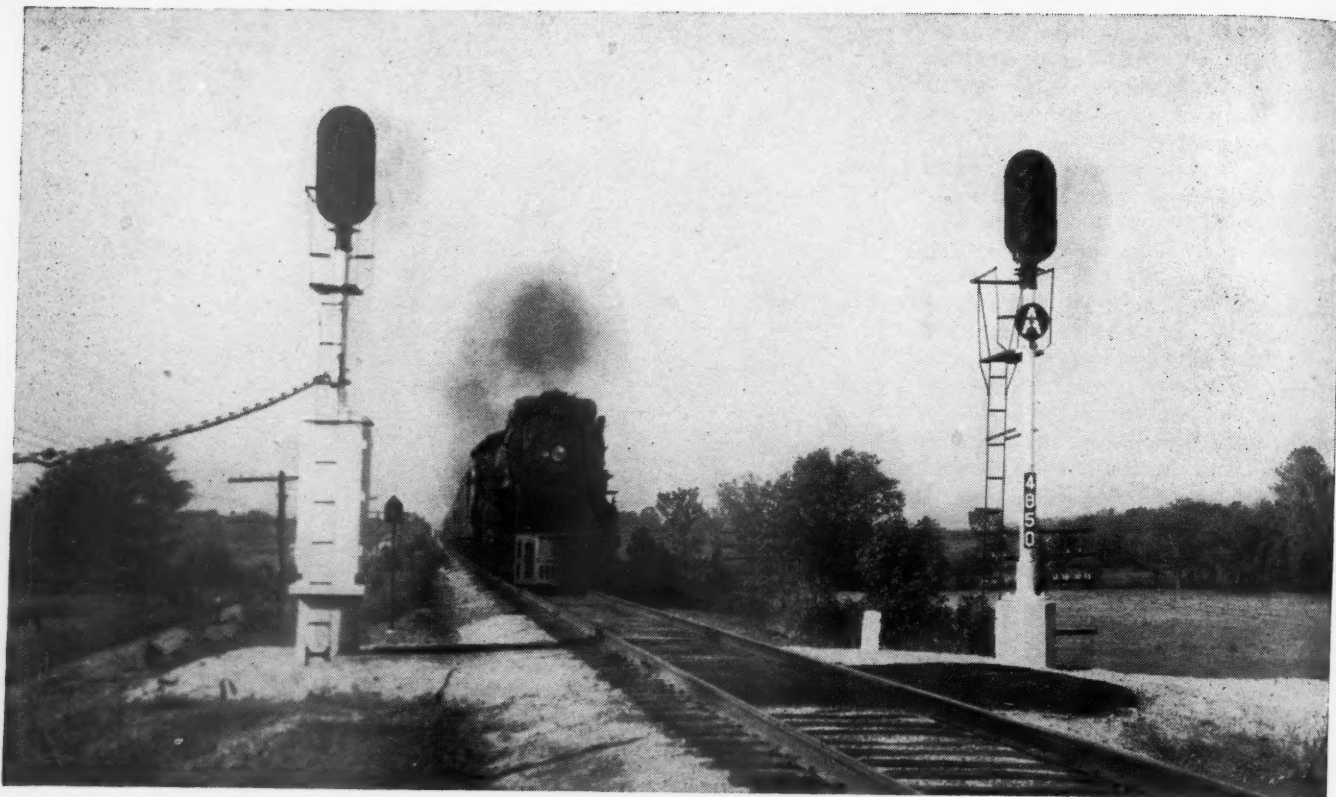
In these and other ways railroad communication engineers are engaged in the utilization of modern electronic devices as applied in all forms of communication adapted to expediting freight traffic, and so serving the shipper more efficiently.

Below—The conductor in a Santa Fe caboose using the radio communication system to converse with the engineman

Above—Yard operations and service to shippers by the Union Pacific, in the Kansas City area, are expedited by radio equipment in the yardmaster's office and on 16 Diesel-electric switch engines

at Kansas City, the Missouri Pacific has an installation including 40 high-fidelity loud-speakers and 22 two-line telephones spaced uniformly throughout 4,500 ft. of platforms, warehouses and docks—all connected to loud-speakers and microphones in three offices. Similar electronic loud-speaker systems have been installed in other freight-houses, as, for example, on the Illinois Central in Chicago, and on the Missouri-Kansas-Texas in St. Louis, Mo. These new communication facilities are an aid in coordinating and expediting the operations of freight-houses so they can render prompt service in handling small shipments of any kind.





These signals are a part of 4,345 mi. of automatic block and 575 mi. of centralized traffic control in service on the Missouri Pacific to aid in the handling of freight traffic

Modern Signaling Expedites Freight

On the road, signals keep trains moving when otherwise they would lose time on sidings; and in yards, retarders reduce delays to cars being classified—The overall saving is 24 hr. on one 2,400-mi. route

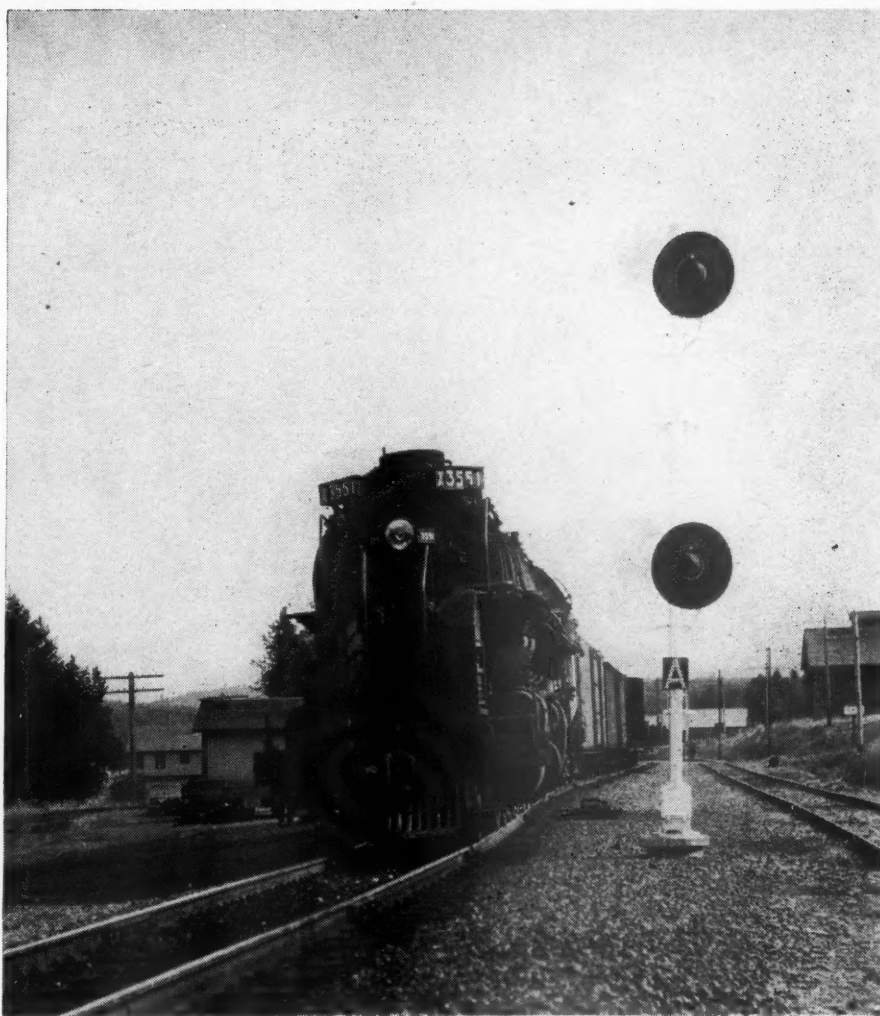


This is one of several C. T. C. control machines on the Seaboard, by means of which power switch machines and signals at the ends of sidings, on entire divisions of up to 100 mi. in length, are controlled from a central point, thus eliminating train delays

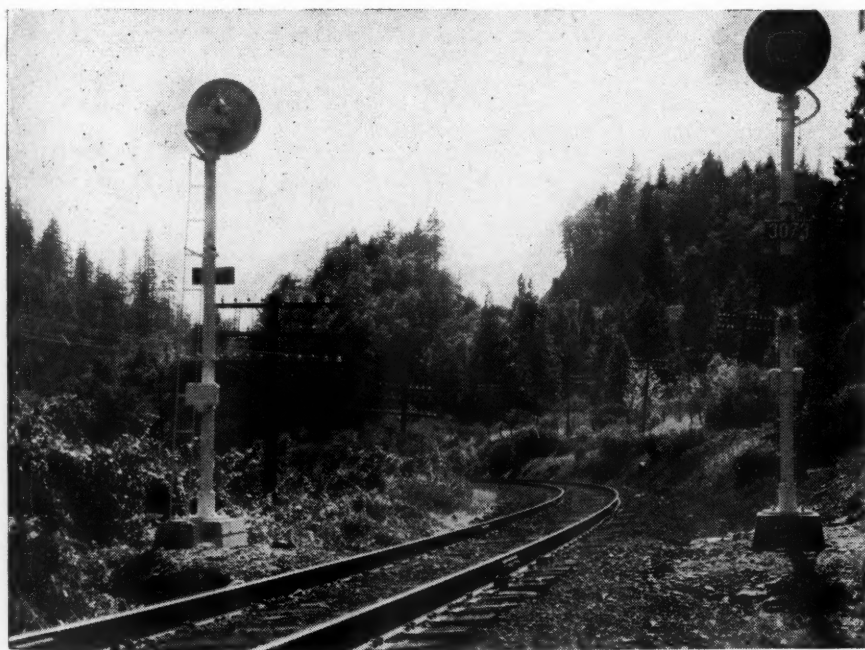
MODERN signaling systems contribute to improved speed, economy, and reliability of the railroads' service to their customers: (1) by reducing overall schedules through minimizing the time lost by trains waiting in yards or on sidings, and (2) by aiding on-time train arrivals and car deliveries through reducing delays occasioned by unexpected difficulties en route. Automatic block signaling, interlockings and centralized traffic control save train time on the road, while power switches and car retarders reduce the time required to classify cars in yards. By thus minimizing standing delays, the overall average speed more nearly approaches that for which the cars, locomotives and tracks are designed. Thus, modern signaling is one of the several important facilities which are being expanded and coordinated by the railroads to expedite freight traffic.

Shippers are also interested in reducing the number of train accidents which might damage or delay their products in transit. Many such accidents are prevented by automatic block signaling because the control circuits (1) reveal to enginemen the presence of trains in the blocks ahead, (2) provide a check on the position of main-track switches, and (3) warn approaching trains of broken rails. A further advantage is an increase in the capacity of tracks because following trains can be operated at closer spacing with safety. This system of signaling is in service on more than 70,000 mi. of road, including about 102,000 mi. of track in the United States and Canada. Of these totals, 2,412 mi. of road—2,743 track-miles—were so equipped in 1946, and extensive projects are planned or already under way this year.

At railroad crossings and junctions, as well as in terminal areas, train movements are expedited by interlocking plants, which include power-operated machines for throwing the switches and signals for directing trains. At each of these plants, control is under a man who operates an interlocking machine in a tower. The railroads have more than 4,400 of these interlockings, about 198 of them having been installed in 1946. These facilities minimize train stops and delays and permit better coordination of the operations of trains to save time. To secure these advantages throughout more extensive areas, as on an entire engine district of 100 miles or more, the railroads have developed a system of signaling known as centralized



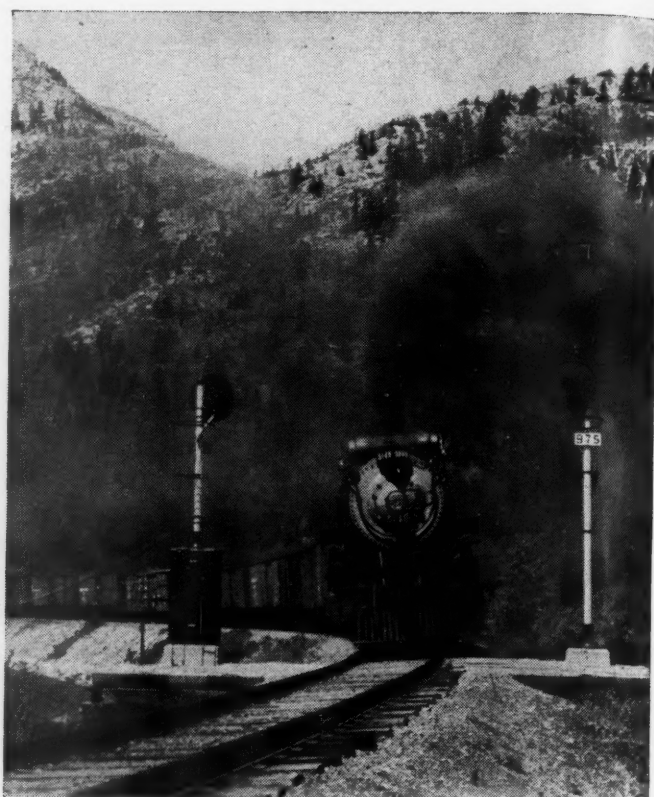
With the aid of centralized traffic control, including power switch machines, the big freight trains keep moving on the Union Pacific line over the Oregon Trail to Portland, Ore.



A typical C. T. C. signal location in California on the Shasta Line of the Southern Pacific. This railroad has seven long installations to keep freight trains moving through the mountain territories

traffic control, which includes signals and power switch machines at passing track switches, all of which are under the control of a man at a convenient specific location.

In centralized traffic control, train movements are authorized by the indications of the signals, rather than by the antiquated methods of using timetables and train orders. Lamps on the track diagram of the C. T. C. control machines show the locations and progress being made by all the trains so they can be advanced for meets on close time, thereby reducing or eliminating the time which would have been wasted under timetable and train-order operation, where train dispatchers have only intermittent information on the movement of trains subject to their control, and similarly discontinuous means of conveying instructions to the crews of these trains. The power switches obviate train stops and delays otherwise required when trainmen have to operate hand-throw switches. In brief, on a busy single-track line the installation of centralized traffic control will save from



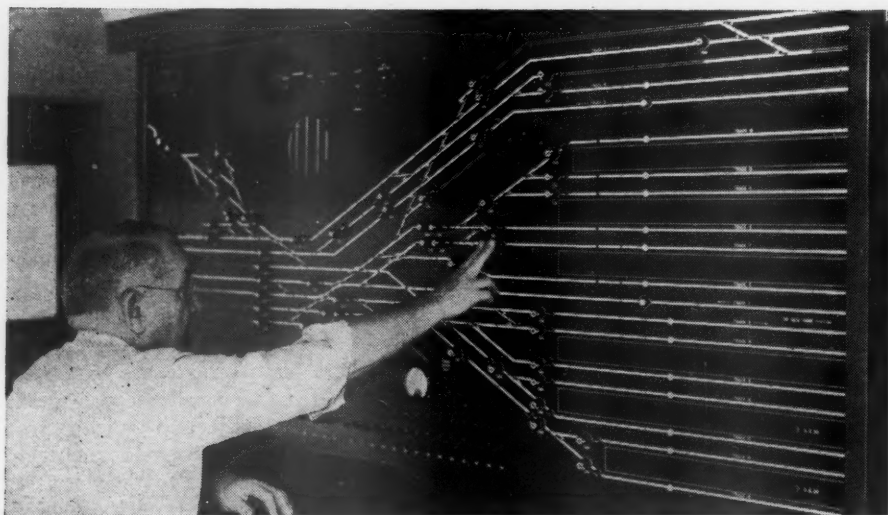
Left—Centralized traffic control is an important aid in the efficient handling of heavy freight traffic on 185 mi. of the Canadian National between Halifax, N. S., and Moncton, N. B. Right—These automatic signals on the Canadian Pacific in the Rocky mountains are part of 320 mi. of new signaling installed on this railroad last year as a means of expediting freight trains

1 min. to 1.5 min. per mile for each through freight train. As applied on double track, centralized traffic control includes signals which will permit train operation in both directions on both tracks, with power-operated crossovers spaced about 15 to 20 mi. apart, so that faster trains can be diverted to the

other track to run around slower trains. The advantage is that it is usually possible to keep all trains constantly in motion, rather than delaying some of them on sidings.

This practice of centralized traffic control was inaugurated in 1927, and has since been applied on more than

7,600 mi. of road, about 1,142 track-miles having been equipped in 1946. Some of the earlier installations were made on comparatively short mileages as a means of relieving congestion at "bottlenecks." After its benefits to train operation had been more widely recognized, the system was extended in numerous instances to entire engine districts ranging up to 100 mi. or more in length. For example, the Chicago, Burlington & Quincy has centralized traffic control on 483 mi. between Lincoln, Neb., and Denver, Colo. With the exception of a few short sections, mostly double track, the Denver & Rio Grande Western has C. T. C. between Denver and Salt Lake City, 570 mi. Similarly, the Union Pacific has double track or single track with C. T. C. almost all the way between Los Angeles, Cal., and Salt Lake City, and similar installations are in service or under construction on all the single track in the route between Salt Lake City and Portland, Ore. Other roads having extended mileages of C. T. C. include the Boston & Maine; the Canadian National; the Canadian Pacific; the Pennsylvania; the Seaboard Air Line; the Norfolk & Western; the Louisville & Nashville; the Missouri Pacific; the Chicago, Rock Island & Pacific; the Chicago, Milwaukee, St. Paul & Pacific;

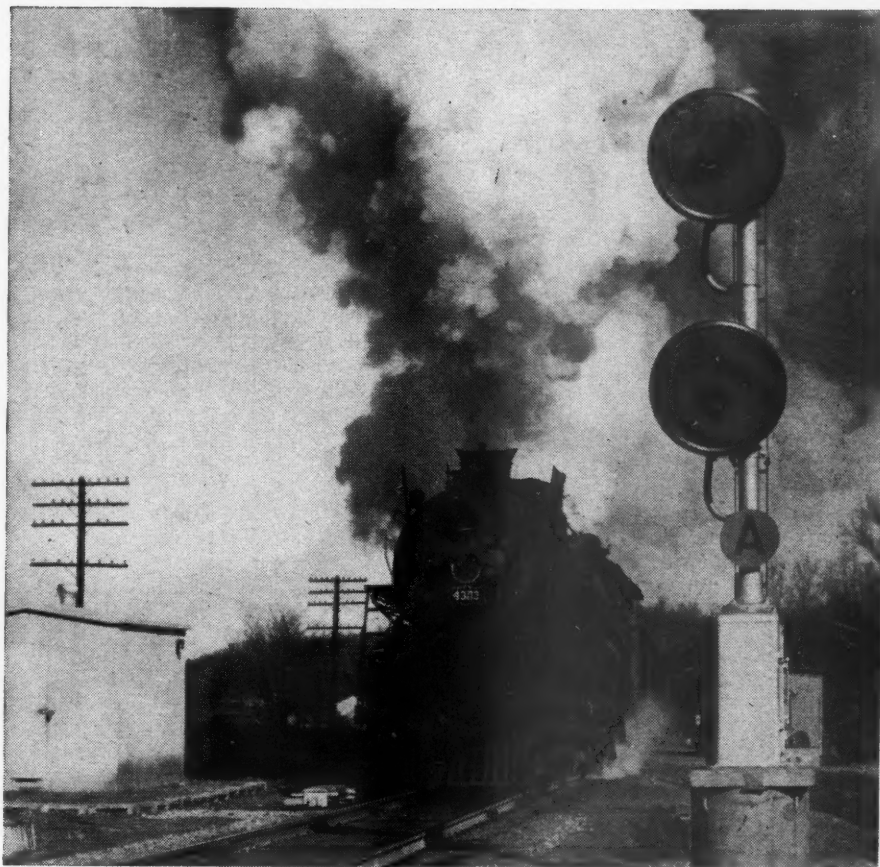


Freight trains going through Utica, N. Y., on the New York Central are expedited by a modern interlocking in which the towerman lines a route merely by pushing two buttons on the control panel. The first button is at a location on the board corresponding with the signal at which the train will enter the interlocking, and the second button is where the train will depart from the plant limits

the Atchison, Topeka & Santa Fe; the Texas & Pacific; the Southern Pacific; the Western Pacific; and many others.

Thus the 350 installations of C. T. C., totaling 7,600 mi., are well distributed over the United States and Canada, so that a car of freight going any great distance, most surely will save considerable time from the centralized traffic control which is almost certain to be in service on part of the route which it traverses—and, quite likely, the part where, except for C. T. C., delays to continuous movement would be most likely to occur. There is, as a consequence, no shipper who is not getting better and more economical railroad service because of the C. T. C. already installed or who will not benefit from still further service improvements as railroads secure funds and materials with which to extend these installations.

In yards also, systems of modern signaling have been installed to facilitate the classification of cars, thereby reducing former delays by hours. For example, the installation of power switch machines and retarders in a gravity classification yard increases the capacity of the yard and makes possible the operation of the yard at peak capacity continuously or for intermittent periods day or night, regardless of weather. As a result, arriving trains can be classified promptly on arrival,



The C. T. C. on 175 mi. of the Frisco between Dillon, Mo., and Monett is an aid in moving important freight trains on fast schedules through the Ozark mountains



This C. T. C. machine is one of several on the important freight line of the Denver & Rio Grande Western and the Denver & Salt Lake through the Rocky Mountains



This man and his machine in a tower control the power switches and car retarders in the Boston & Maine yard at Mechanicville, N. Y., so the yard can be operated at maximum capacity day or night, winter or summer, thereby aiding the on-time arrival of freight at destinations



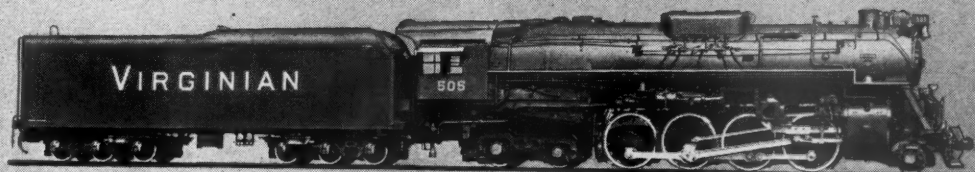
A car retarder consists of a set of brakes along the rail which act on the sides of the wheels to control the speed of cars as they pass down the incline to the classification tracks in a yard. These retarders with power switches are controlled by a man in a tower, thereby permitting trains to be made up and depart sooner. The view shown is the Burlington yard at Galesburg, Ill.

and are thereby delivered to the consignee or made up in trains for further road movement much sooner than otherwise would be possible. These signaling facilities are in service in more than 40 of the larger classification yards, and more such yards are to be equipped as soon as practicable.

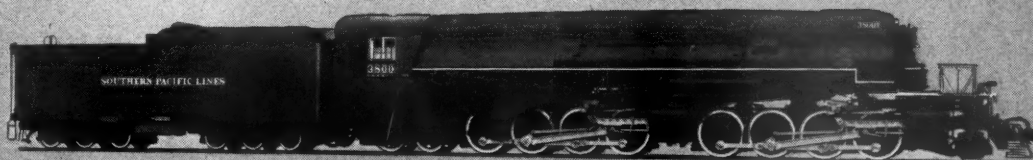
An overall picture of the combined time savings effected by modern signaling can be gained by following the movement of a car of freight over a certain route of approximately 2,390 mi. between shipper and consignee. This route includes 1,266 mi. of single track equipped with C. T. C., and about 754 mi. of double track, some of which is equipped for train operation by signal indication in both directions on both tracks. The remaining 370 m., which is single track, is equipped with automatic signaling to which C. T. C. is to be added by programs now being planned. A car on this route passes through many modern interlockings and three classification yards equipped with retarders. Applying conservative values of 1 min. per mile saved by the C. T. C. and 1 hr. for each yard equipped with retarders, the overall saving accomplished by these signaling facilities totals 25 hr. Add to this the increased safety factor in the movement of freight, and the advantages of modern signaling to the shipper are readily evident.



Richmond-Fredericksburg & Potomac 2-8-4



Virginian 2-8-4



Southern Pacific 2-8-8-4



Chesapeake & Ohio 2-6-6-6

WORKS, INCORPORATED, LIMA, OHIO

GENERAL NEWS

"Banker-Lawyerism" Seen Harming RRs

Young hits "plum" and "melon"
hunting in address at
National Press Club

What he called the "banker-lawyerism"—that has brought into railroad boards of directors, he said, an "infestation of pessimists" whose main interest is the hunting of "plums" and "melons"—was assailed by Robert R. Young, chairman of the Federation for Railway Progress, the Chesapeake & Ohio and Alleghany Corporation, in a May 8 luncheon address at the National Press Club in Washington, D. C. Mr. Young also attacked the Interstate Commerce Commission, saying that, although "there is not time today," he could cite "instance after instance of insincere findings, actions, and inactions by the commission detrimental to the public interest, all to curry favor of the railroad lobby."

"If the nation and you gentlemen," he said, "want an end to rate discrimination, to the car shortage, to bankruptcy frauds, and to stubbornly continued railroad policies that seem designed to force passengers onto the air lines and highways, then let us put an end to plum hunting. You can no more expect integrity in government or competition in industry from multi-cliented bankers and lawyers engrossed in self-perpetuation than you can expect world disarmament from the only other aristocracy left in the world, the military."

Busy Week—With the Press Club address Mr. Young wound up a week of Washington activities which included also appearances at hearings on two congressional investigations of railroad matters—the Senate banking and currency committee's inquiry into the extension of the Baltimore & Ohio's loan from the Reconstruction Finance Corporation, and the investigation into the distribution of freight cars which has been launched by the recently-organized "Western Caucus" of congressmen. The Young presentation in the latter connection is reported elsewhere in this issue, along with the reply it drew from William T. Faricy, president of the Association of American Railroads.

Mr. Young's Press Club address was entitled "Democracy in Degeneracy," and it contained many pungent phrases which brought laughter and applause. He quite obviously enjoyed making the speech during which he was frequently smiling as he paused from time to time in seeming expectation of the laughs which always came. The introductory remarks by War-

(Continued on page 1053)

Buford Succeeds Scandrett as Milwaukee's President

Charles H. Buford, executive vice-president of the Chicago, Milwaukee, St. Paul & Pacific, was elected president of the company at a meeting of the board of directors on May 13. He succeeds H. A. Scandrett, whose intention to retire on that date was reported in last week's *Railway Age*.

Additional Hearing Dates Set in Water-Rail Rate Cases

Hearings on those phases of the general Ex Parte No. 164 investigation of water-competitive railroad rates which involve transcontinental rail rates, intercoastal water rates and all-water, water-rail and rail-water rates between Pacific Coast ports and interior points will be continued at the office of the Railroad Commission of California, San Francisco, Calif., on May 26, it was announced last week by the Interstate Commerce Commission. Commissioner Alldredge and Examiner Hosmer will preside.

The hearings also will be resumed June 11 at the Washington, D. C., offices of the I. C. C., and oral argument on the lawfulness of the so-called interim proposed rates will be held before the full commission at Washington on June 12.

The I. C. C. also has set May 26 as the date of additional hearings at San Francisco in the proceedings involving all-rail commodity rates between California, Oregon and Washington, Pacific coastwise water rates and Pacific Coast fourth section applications. Commissioner Alldredge and Examiner Pyne will preside. These proceedings also have been assigned for oral argument before the full commission at Washington on June 13.

Eastern Carriers Seek Less- Carload Rate Increase

Public hearings were held in Chicago May 8 to consider a proposal of the eastern carriers that fourth class be made the minimum rating on all less-carload and any-quantity exceptions ratings applying from, to or within the Official Classification territory. On May 9 hearings were held on a proposal to revise the class rates for application on l. c. l. traffic rated fourth class or higher in the Official Classification. This revision would result in an increase of slightly more than 100 per cent for distances of 5 or 10 miles, gradually tapering down to an increase of approximately 39 per cent for distances of 100 mi., 25 per cent for 200 mi., 12.4 per cent for 500 mi., down to 10 per cent for 1,600 mi. Subsequent hearings will be held on May 22 at Chicago.

Faricy Issues Reply to Robert R. Young

A. A. R. president answers
statement made before
western congressmen

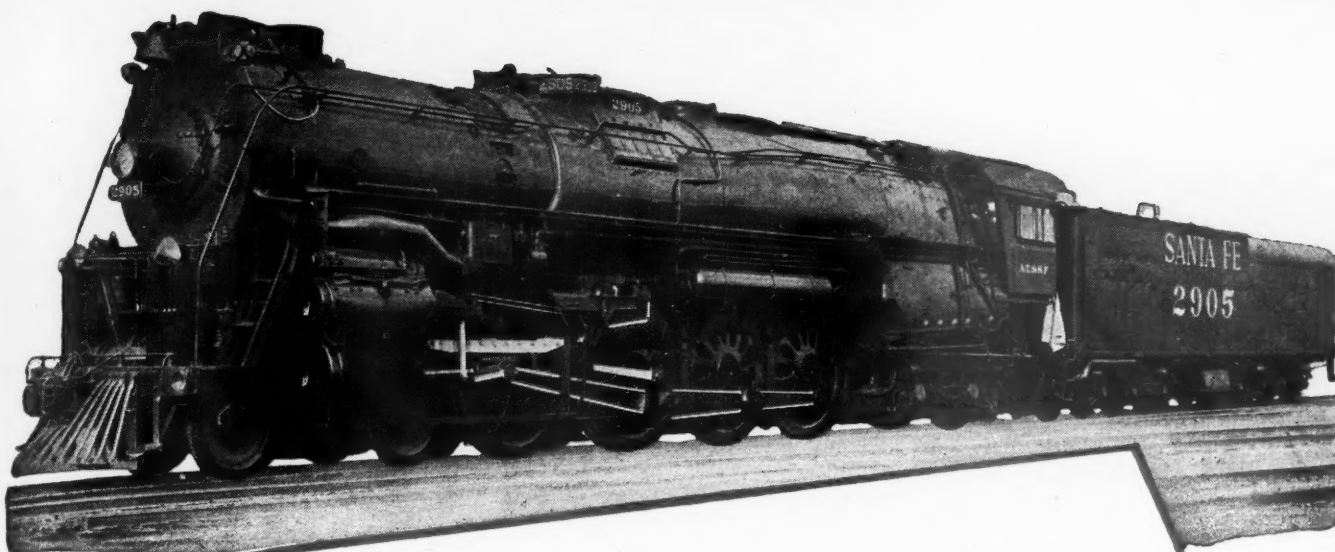
The so-called "Western Caucus" of congressmen, which was organized recently to conduct an investigation into the distribution of freight cars, on May 8 heard a statement by Robert R. Young, chairman of the Chesapeake & Ohio and Alleghany Corporation. Mr. Young presented his views with respect to many individuals and government agencies and dealt with subjects other than the car shortage, but he found the latter "directly related" to per diem policies and other practices of the Association of American Railroads.

The presentation drew a prompt A. A. R. reply in the form of a public statement from President William T. Faricy, who did not find it "surprising" that the C. & O. chairman had "attacked the competence or integrity, or both, not only of the railroads of the country, but also of the President of the United States, members of the President's cabinet, the Interstate Commerce Commission and all its members, the Reconstruction Finance Corporation and, indeed, virtually every one who has not gone along with Mr. Young's efforts to run a shoestring investment in a holding company up to a dominant position of power in the transportation world."

Faricy Speaks Out—The "outburst" was but a "repetition and enlargement" of Mr. Young's "stock speech of denunciation of all who do not acquiesce in his drive for publicity and power," Mr. Faricy continued, adding that "Mr. Young this morning accused the President of the United States of being guilty of an 'insincere veto' of the railroad reorganization bill as a result of pressure from St. Louis politicians. He accused members of the President's Cabinet of being under Wall Street influence. He accused the Interstate Commerce Commission of such outright fraud upon 'widows and orphans' as to call for its abolishment or the removal of all its members. He even went so far as to throw suspicion upon the appointment of General Marshall as Secretary of State. In addition to all this, Mr. Young is not pleased with the Association of American Railroads. This we do not find surprising. The only person who seems to meet Mr. Young's requirements is Mr. Young himself."

The A. A. R. president suggested that the "distinguished and respected figures in our government" who were mentioned by

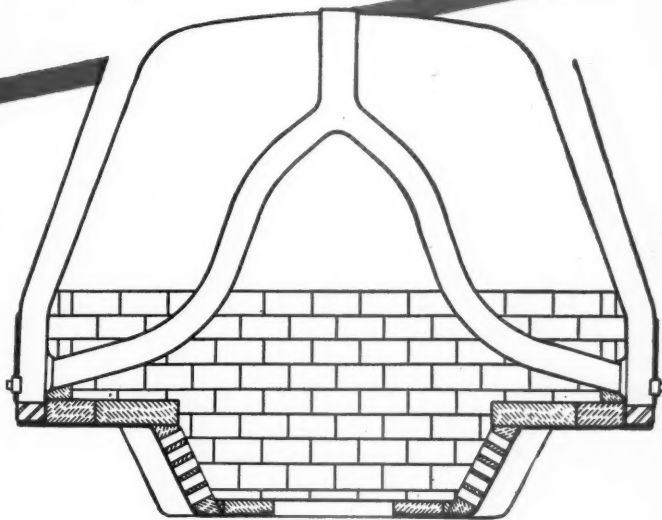
(Continued on page 1057)



OIL-BURNING LOCOMOTIVES
are being equipped with...
SECURITY CIRCULATORS

SINCE the introduction of Security Circulators to oil-burning locomotives, 693 circulators have been ordered by ten different railroads for 132 steam locomotives burning oil.

The value of Security Circulators in these locomotives has been demonstrated conclusively by improvement in boiler performance and minimizing of firebox maintenance, as the direct result of the better circulation of water in the boiler produced by the circulators.



Cross-section of Security Circulator installation in oil-burning locomotive

AMERICAN ARCH COMPANY, Inc.

NEW YORK • CHICAGO

SECURITY CIRCULATOR DIVISION

Freight Car Loadings

Car loading figures for the week ended May 10 were not available when this issue went to press.

Loading of revenue freight for the week ended May 3 totaled 882,684 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, May 3			
District	1947	1946	1945
Eastern	171,688	145,377	158,213
Allegheny	189,345	127,583	185,439
Pocahontas	66,130	14,805	51,629
Southern	134,509	115,520	130,015
Northwestern ..	127,154	96,783	132,921
Central Western ..	129,761	111,573	128,311
Southwestern ..	64,097	59,670	79,506
Total Western Districts	321,012	268,026	340,738
Total All Roads	882,684	671,311	866,034
Commodities:			
Grain and grain products	43,951	35,428	52,359
Livestock	15,479	18,399	17,629
Coal	178,672	32,606	143,441
Coke	14,650	5,746	15,279
Forest products ..	47,267	45,879	43,052
Ore	65,884	27,167	73,702
Merchandise I.C.L.	124,149	130,280	112,922
Miscellaneous ..	392,632	375,806	407,650
May 3	882,684	671,311	866,034
April 26	893,776	660,264	899,950
April 19	865,846	650,843	864,700
April 12	758,166	649,298	847,013
April 5	715,159	643,644	765,672

Cumulative total,
18 weeks 14,633,646 13,008,339 14,321,599

In Canada.—Car loadings for the week ended May 3 totaled 75,165 cars, as compared to 76,033 cars for the previous week and 66,627 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
May 3, 1947	75,165	38,271
May 4, 1947	66,627	32,359
Cumulative totals for Canada:		
May 3, 1947	1,246,944	674,848
May 4, 1947	1,189,947	625,013

Railroads Urge Prompt Sale of Federal Barge Lines

Immediate disposal of the Federal Barge Lines, operated by the Inland Waterways Corporation under the jurisdiction of the Department of Commerce, was advocated by railroad witnesses who appeared last week before a subcommittee of the so-called select committee on small business of the House of Representatives. The subcommittee, which concluded hearings in Washington, D. C., on May 12, was expected later this week to submit to the House appropriations committee its recommendations with respect to the future of I. W. C.

Dr. J. H. Parmelee, director of the Bureau of Railway Economics of the Association of American Railroads, and principal railroad witness, told the subcommittee that the "history and operation" of the F. B. L. "makes it clear . . . that no sound governmental policy would justify continuation of government operation." "The government should withdraw from this enterprise without delay, to the best

possible advantage," he said. "It should dispose of the barge line as rapidly as possible, but in any event should completely liquidate its operation."

Tonnage Declining.—According to Dr. Parmelee, the average annual total tonnage of the F. B. L. decreased from 2,239,286 tons in the 1936-40 period to 2,146,761 tons in 1941-45 and 1,889,259 tons in 1945. "Although comparable tonnage figures for 1946 have not yet been published," he stated, "preliminary information indicates a further sharp decrease. Apparently the total tonnage in 1946 was some 25 per cent below that of 1945."

With respect to financial returns, Dr. Parmelee observed that the I. W. C. has no funded debt and has never been called upon to earn a return on the investment the government made in it. "As of December 31, 1945," he said, "that investment consisted of \$22,362,843, made up of \$12,000,000 of corporation stock purchased by the government, and \$10,362,843 of government property, mostly barges and towboats, turned over to the corporation by the government."

Dr. Parmelee said that "it is not ex-

pected" that the F. B. L. could be disposed of to private interests under terms which would require those private interests to engage in services with no economic justification.

"For this reason," Dr. Parmelee added, "appropriate legislation should be enacted which would not restrict the conditions under which the government might dispose of the . . . lines in such a way as to in effect make disposition impossible."

Dr. Parmelee said that "it appears that a very large additional investment . . . of some \$17,000,000" would be necessary in order to continue government operation of the F. B. L. "Investment of any such sum of money would make it more difficult, rather than less difficult, for the government ultimately to dispose of the barge line," he said. "As a matter of fact, there would seem to be no hope at all that such an additional investment could ever be recovered, except in very small part, upon final disposition of the lines by the government."

"It is our view," he contended, "that this unpleasant fact should be squarely faced and the most made of a bad situation. This would mean that the government should

Supreme Court Upholds I. C. C.'s Class-Rate Decision

The Supreme Court of the United States on May 12 upheld the Interstate Commerce Commission's interim order in the No. 28300 class rate case which requires a general increase of 10 per cent in class rates applicable within Official territory and a general decrease of 10 per cent in class rates applicable within and between Southern, Western Trunk-Line, and Southwestern territories and between those territories on the one hand and Official territory on the other. The ruling came in an opinion affirming the May, 1946, decision of the special three-judge federal court, sitting at Utica, N. Y., which had also sustained the commission, although it issued an injunction staying the rate adjustment pending the appeals to the Supreme Court.

The latter's determination also vacates that injunction. It was a 7-to-2 decision, the majority opinion, a document of 63 pages, having been written by Justice Douglas while dissents came from Justices Frankfurter and Jackson.

When this issue went to press, there was no indication as to when the railroads would be required to make the new rate adjustment effective. As originally issued with the commission's decision in May, 1945, the order requiring the interim adjustment prescribed an effective date of August 30, 1945. Subsequent postponements by the commission had pushed the effective date forward to January 1, 1946, by which time the Utica court's injunction had been issued.

The case before the courts embodied three appeals which had been consolidated into one proceeding. They were filed by a group of northern states

headed by New York by the governors of the six New England states, and by a group of western railroads.

The Supreme Court's majority opinion was a detailed review of the record in the case, it held generally that the commission's findings were within its authority under the Interstate Commerce Act and were supported by an abundance of evidence. Dissenter Frankfurter was not satisfied that the commission had been sufficiently "explicit and definite in its findings on the elements that are indispensable to the validity of its order." Dissenter Jackson, who called the majority opinion an "extraordinary decision," protested most against the upholding of the Official-territory rate increase which he called a "surtax . . . added solely to increase shipping costs in the northeastern part of the United States and in order to make transportation cost as much there as it does in areas where there is less traffic to divide the cost." The Jackson opinion noted that Justice Frankfurter also joined in it.

The commission's decision, noted in the *Railway Age* of May 26, 1945, page 937, embraced also the No. 28310 investigation of the Consolidated Classification. The interim adjustment is a preliminary step which the railroads are required to take while they proceed to comply with the decision's permanent plan calling for the establishment of a uniform classification to apply throughout the country and a completely-revised scale of class rates to apply in all territories except Mountain-Pacific. As the above list of affected territories indicates, the interim rate adjustment will not apply to the Mountain-Pacific area.

PROGRESS

THE General Motors freight locomotive looms large as the major tool of American railroads in the mighty struggle for traffic against competitive services.

For here is a locomotive which has proved it can continuously haul more tonnage farther in a given time, economically, than any other motive power.

Introduced in 1940, following


Electro-Motive equipment in the passenger and switcher fields, it is said to have been the one power more than any other which enabled the railroads to handle the enormous traffic burdens of World War II.

Today General Motors freight locomotives operate across 24,109 miles of American trackage. In 1946 they hauled an estimated total of 120 billion gross ton-miles of freight.

Greater hauling capacity has been demonstrated by 6,000-horsepower GM Diesel freight locomotives which have hauled more tonnage on heavy grades than the most powerful steam locomotives — and have hauled it faster.

Heavier loads on faster schedules, and greater flexibility in fitting the power to the job indicate the high level of efficiency of General Motors Diesel locomotives. Their operating and maintenance economies are matters of common knowledge in railroad circles.

Back of it all are two and a half decades of Electro-Motive pioneering and research — the know-how gained in the successful operation of some 2,900 General Motors Diesel units — and the experience of more than 350 million miles in passenger service and some 325 million miles of freight service.



All component parts of General Motors locomotives are engineered, manufactured and serviced by one organization — Electro-Motive Division at La Grange, Ill. The high degree of control of all processes made possible by this concentration of all necessary functions in one organization at one location results in a balance of design, uniformity of high-quality manufacture, and service and parts follow-up unrivaled in the motive power field.

GENERAL MOTORS
LOCOMOTIVES

ELECTRO-MOTIVE DIVISION
GENERAL MOTORS LA GRANGE, ILL.

dispose of the barge line facilities which it owns without attempting to place any impossible or artificial requirements in connection with the sale concerning continued service or operation. Certainly, the government does not owe to any small group of shippers an obligation to see that they continue to receive transportation services at less than cost either from the government or from private operators. On the contrary, government efforts we think should be directed to the elimination of discrimination in transportation, rather than continued encouragement of preferred treatment to a small group of shippers."

Growing Deficits—Dr. Parmelee noted further that the combined net deficit of the F. B. L. totaled \$1,231,000 in 1944 and 1945, adding that preliminary 1946 indications are that the net deficit for the latter year "was much greater than in 1945, and greater than in any previous year of operation, back to 1924." Asserting that "the tide of rising costs and wages has caught up with the corporation, along with the fact that no enterprise, even one owned and subsidized by the government, can continue indefinitely operating in the red," Dr. Parmelee remarked that "even an inefficient government enterprise can, however, work great harm in the way of unfair competition on the railroads and to private barge lines on the waterways." "Like grandfather's clock," he added, "the Federal Barge Lines have been gradually running down. Operating at almost steady loss during the last 10 years, at the same time that its equipment has been wearing out, the enterprise faces the alternative prospect of going out of business because it is physically unable to continue, or receiving another shot in the arm, in the shape of government appropriations."

In response to questions, Dr. Parmelee asserted, among other things, that (1) the government should not compete with private industry; (2) private barge line competition is on a "fairer basis" with the railroads than that of the F. B. L.; and (3) if the F. B. L., which he described as an "unfair competitor," were measured and evaluated on a business basis, it would be "put out of business tomorrow." At the same time, he declared that loans made by the Reconstruction Finance Corporation to the Baltimore & Ohio and other carriers is a "different proposition" with respect to unfair competition than government ownership of the F. B. L. With respect to the B. & O. loan, he said that the loan was made on collateral, interest is charged and "there is a rate of return and all that sort of thing."

For Absolute Sale—Another railroad witness, J. Carter Fort, vice-president and general counsel of the A. A. R., contended that the F. B. L. should be sold to "the best advantages of the government, without any strings on it at all." "Someone should be authorized and empowered to sell it," he said. "If he could sell it as a whole to better advantage of the government, I assume that he would. If he could sell it to better advantage by selling parts of it as going concerns, I would assume that he would do that. And if he could do nothing better than sell the physical facilities, I think he should be

\$1.25 Per Diem Rate to Be Effective June 1

The Association of American Railroads announced on May 13 that the per diem rate for the rental of freight cars would be increased from \$1.15 per car to \$1.25, effective June 1. The announcement stated that the increase, which was based on "known increases in car-ownership costs" had been approved by a majority vote of the railroads.

As noted elsewhere in this issue, A. A. R. President William T. Faricy's reply to attacks on the association's per diem policy by Robert R. Young, chairman of the Chesapeake & Ohio, revealed that the A. A. R. board of directors had recently submitted the proposed increase to a vote. The May 13 announcement said that the ownership costs for the year 1946 are now under detailed study by a special committee and further consideration will be given to the level of the per diem car rental when the report of this committee is available.

permitted and directed to do that. . . . We believe that if you put \$17,000,000 to \$20,000,000 in this property, you would not have a chance of getting it back."

Other railroad witnesses appearing briefly in support of an F. B. L. sale included G. A. Hoffelder, assistant general freight traffic manager of the Chicago, Burlington & Quincy; E. R. Roby, assistant freight traffic manager of the Louisville & Nashville; H. S. Powell, assistant general freight agent of the Illinois Central; S. S. Alderman, general counsel of the Southern; and Joseph Marks, assistant freight traffic manager of the Southern. Other roads and agencies in communications to the subcommittee, also favored government withdrawal from the F. B. L. These included the New York Central, Atchison, Topeka & Santa Fe, Great Northern, Chicago & North Western, St. Louis-San Francisco, Chicago, Milwaukee, St. Paul & Pacific, the National Industrial Traffic League and the Conference of American Small Business Organizations.

I. W. C. Would Spend More—Captain A. C. Ingersoll, president of the I. W. C., urged rehabilitation of the lines before their disposal. "I suggest that modern rehabilitation be begun at once and pushed as vigorously as is feasible, and that meanwhile the Secretary [of Commerce] be advised to begin negotiations with any and all interested parties looking toward the sale of the line under the present law as soon as a deal can be made," he said. Declaring that he does not believe in "government in business," Captain Ingersoll asserted that the sale of the F. B. L. could be effected "in a much more favorable atmosphere if the government is proceeding vigorously with rehabilitation and the pattern of a future successful operation is beginning to take shape, than if the line is left stalled in the doldrums in the last stages of decrepitude."

Replying to charges that the F. B. L. has sustained "heavy losses," Captain Ingersoll said he "understood" that the Pennsylvania Railroad "lost a hundred million dollars last year" and that the Trans World Airlines "lost a million dollars a month last winter." "Does anyone suggest they be liquidated?" he asked, adding that the I. W. C., as a whole, had a deficit of \$2,141,822, as of January 1.

Captain Ingersoll said that attacks made against the F. B. L. are "relentlessly voiced by persons whose chief aim is apparently to limit the field of competition in the future." "Against these we must balance the simple fact that through the development of the Federal Barge Line a tremendous army of shippers have come to enjoy the benefits of a lower, alternative rate structure and are no longer chained to the chariot wheels of the railroads," he said.

W. G. Oliphant, its general traffic manager, was the only other F. B. L. witness. He presented varied statistical reports embracing the operations of the F. B. L., which, he emphasized, was not being operated at a loss on all routes.

Equipment and Supplies

G. N. to Spend \$9 Million for New Diesels, Freight Cars

Spending of approximately \$9,000,000 for new motive power and freight equipment was authorized by the Great Northern board of directors, meeting at St. Paul, Minn., on May 8. F. J. Gavin, president of the G. N., said the equipment would include nine 4,500-hp. Diesel electric locomotives for freight and passenger service, 500 box cars to be built in the road's shops and 400 refrigerator cars to be constructed for the Western Fruit Express, a subsidiary of the G. N. He said the Diesels are expected to be delivered late this year.

M. P. To Spend \$15 Million for 49 Diesels This Year

The Missouri Pacific management has been authorized to purchase 49 Diesel-electric locomotives, costing \$15,809,000, P. J. Neff, president and chief executive officer, announced on May 10. Thirty-nine of the new units—consisting of four 2,000-hp. passenger locomotives and of 1,000-hp. switchers and freight units of 1,500 hp., 3,000 hp. and 4,500 hp.—will be placed in service on the line between Osawatimie, Kan., and Pueblo, Colo.

The M. P.'s Texas lines will receive 10 freight locomotives, of which six will be two-units of 3,000 hp. and four will be three-units of 4,500 hp. Mr. Neff said that "as fast as the new equipment is delivered, estimated to be from four to twelve months hence, old steam locomotives that would have required extensive repairs will be retired." With the delivery of this equipment and that previously ordered for this year, the M. P. will have in service a total of 153 Diesel-electric locomotives.

8-year system-wide test on Western road points way to longer life for cylinder and valve bushings

RAILROAD mechanical officials are so familiar with the physical and wearing qualities of Hunt-Spiller Gun Iron that most of them have preferred it for bushings and other vital locomotive parts for more than 35 years.

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FREIGHT CARS

The WABASH has ordered an additional 300 50-ton box cars from its Decatur, Ill., shops. This order, with that for a similar lot reported in the *Railway Age* for April 19, brings the total of 50-ton box cars on order from the road's own shops up to 600. Production of these cars is scheduled to begin in January, 1948.

Car Service

I. C. C. Service Order No. 240, which restricts the number of diversions or reassignments permissible on refrigerator cars loaded with potatoes, has been extended by Amendment No. 2 which set back the expiration date from May 18 until December 1.

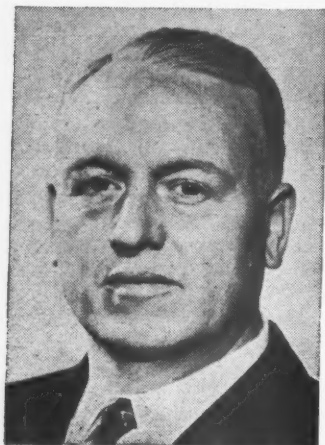
I. C. C. Service Order No. 620 (revised), which prohibits the light-weighting of cars intended for loading with imported commodities at the ports, has been extended by Amendment No. 3 which set back the expiration date from May 10 until December 1.

Supply Trade

J. A. Chitwood has been appointed general traffic manager of the Sun Electric Corporation, with headquarters in Chicago.

The corporate name of the Galvin Manufacturing Corporation has been officially changed to Motorola Inc., it has been announced.

George L. Fox has been appointed sales manager for the Rusta Restor division of the Johnston & Jennings Co., Cleveland, Ohio, to succeed A. B. MacTaggart, who is retiring from sales work



George L. Fox

to devote his full time to research and development. Mr. Fox has served as a sales representative for the company in Michigan and just before his recent ap-

pointment, was sales representative in the Ohio territory.

Homer Parsons, formerly assistant director of exports for the American Brake Shoe Company, has been appointed director of exports. Mr. Parsons was born in Pelham, N. Y., on January 15, 1910. In 1929 he became associated with the Irving Trust Company, where he remained



Homer Parsons

until 1936, when he joined D. McLagan & Co. He served with the latter company until he joined American Brake Shoe in 1945.

Fred Meyer has been appointed chief engineer of the railroad industry division of the Nelson Stud Welding Corporation, Lorain, Ohio. A graduate of Armour Institute of Technology, Mr. Meyer was previously a member of the sales engineering staff of the Owens-Corning Fiberglas Corporation.

The Bethlehem Steel Company has established a district traffic office at Sparrows Point, Md., with Paul A. Fryer in charge as district traffic manager, having jurisdiction over all of the company's traffic matters in the Baltimore (Md.) area. Mr. Fryer, formerly district traffic manager at Chicago, is succeeded at that point by E. D. Haugh, district traffic manager for the Bethlehem Supply Company at Tulsa, Okla.

OBITUARY

Fred J. Latter, traffic manager of the Texas Gulf Sulphur Company, Newgulf, Texas, died on April 29 in the Memorial hospital, Houston, Texas, after a long illness. Mr. Latter was born in Westmount, Canada, on November 9, 1878. He entered railroad service as assistant paymaster on the Canadian Pacific, in 1894. After leaving Canada, he was employed by the Southern Pacific as traveling freight agent out of Shreveport, La., and later by the Houston Belt & Terminal. He left the latter road in March, 1919, to join the Houston Ice & Brewing Co. as shipping clerk. In October, 1919, he joined the traffic department of the Texas Gulf Sulphur Company as chief clerk and was appointed head of that department in June, 1930.

Railway Officers

EXECUTIVE

E. H. DeBoard, traffic manager of the Detroit, Toledo & Ironton at Dearborn, Mich., was elected vice-president—traffic, at a board of directors' meeting on April 29

FINANCIAL, LEGAL AND ACCOUNTING

Mart W. Reeves has been appointed an attorney of the Missouri-Kansas-Texas, with headquarters at Dallas, Tex.

OPERATING

C. A. Manthe has been appointed superintendent of the Great Northern's King Street terminal, at Seattle, Wash., succeeding F. E. Bisbee, who has retired.

H. W. Purvis, receiver and general manager of the Georgia & Florida, with headquarters at Augusta, Ga., has, at his own request, because of failing health, retired from active management of this road after 52 years of railroad service, 25 of which have been with the Georgia & Florida. Mr. Purvis will continue to serve as receiver. I. R. White, superintendent of transportation at Augusta, has been appointed general manager. L. O. Todd, assistant to receivers and assistant general manager at Augusta, has been appointed assistant to receivers and chief accounting officer. The positions of assistant general manager and superintendent of transportation have been abolished. F. S. Griffin has been appointed superintendent; H. N. Molton becomes car accountant and C. R. Arrington has been named chief dispatcher.

TRAFFIC

D. H. Nicholson has been appointed general agent of the Missouri-Kansas-Texas, with headquarters at Detroit, Mich.

David A. Lewis has been appointed general agent of the Illinois Terminal, at Chicago, succeeding William J. Researits, who has been assigned other duties.

J. H. Tanner has been appointed acting manager of mail, baggage and express departments, Denver & Rio Grande Western, at Denver, Colo., succeeding to the duties of C. W. Wiegel, who has retired.

J. F. Stenson has been appointed assistant general northern agent of the Nashville, Chattanooga & St. Louis, at Chicago, succeeding I. N. Phillips, whose death on April 14 was reported in the *Railway Age* of April 19.

SPECIAL

Philip B. Swain has been appointed chief of personnel procedures of the Chesapeake & Ohio, the New York, Chicago &

17, 1947

Conceding that he and his audience would do little about world affairs, Mr. Young

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went on to assure them that "there is a lot you and I can do about the railroad industry." That industry, he went on, "typifies what is going on in Britain and all parts of the world, the persistent encroachment of non-owners upon the property rights of others." Then came the attack on "banker-lawyerism," which the C. & O. chairman said is now "more firmly entrenched than ever" in the United States. "If only our far-gazing Don Quixotes would coalesce on that issue!" he exclaimed. And he added that he has a compilation which shows that 611, or 70 per cent, of the directors of some 70 Class I roads own on record less than \$3,000 each of stock in the properties they direct.

"Now these men are not beggars," Mr. Young continued. "From the advice they have been giving their clients for 20 years, presumably, their own investments are in the motors and the air lines. This infestation of pessimists in the railroads is not due to neglect by the owners.

There are tens of thousands of bona fide rail investors who believe in the railroads and who would make excellent directors—owners are always the best husbands. But membership in the railroad directors' club is harder to break into than is the most exclusive club on Park avenue.

"Why is it these non-owner directors will leave their homes sometimes for three days at a time—all for a \$20 director's fee? Well, there was a time when security financing was the main reason; but C. & O. broke that one up. High up among the reasons is the direct banking patronage. It is estimated that the railroads have on deposit over one billion one hundred million dollars, mostly in a few New York banks. This huge sum of other people's money invested in government securities involves a lot of hard labor for their clerks in clipping coupons—but the right set still have time to supervise the operation and to stop in at the club before dinner. In addition there are the banking fees: For trustees of equipment

issues, agents for stock transfer, payment of bond coupons—the most sought after of all banking emoluments. Railroads pay out annually nearly three million dollars for these services, again mostly to a few New York banks.

A Third of Heavy Industry—"Now these are only the plums which account for the exclusive set's avidity for horticulture in other men's gardens. There are melons as well. The railroads buy steel, equipment, paint, lumber, coal and other supplies to the vast sum of two thousand million dollars a year; thus, accounting for one-third of the heavy industry of America."

It is Mr. Young's observation that top officers of large corporations "prefer that their boards consist of plum hunters"; for directors of that type are "easily appeased—by patronage," whereas "owner-directors on the other hand are troublesome—insist on progress." Because the "top eastern law firms," like the "top eastern banks," have their 'country correspondents, Mr. Young is 'amused when Mr. Truman—needled about New York domination of our railroads—advocates that railroad directors should be selected from along the line."

"Strangely," the C. & O. chairman added, "these politicians never advocate the only honest remedy consistent with principles of private property, that railroad directors should be limited to owners, without conflict." As for himself, Mr. Young "would rather have an owner from Timbuktu to represent me than a non-owner from St. Louis."

He then proceeded to attacks on the "top Morgan law firm, Davis & Polk," which has "collected millions of dollars in legal fees from no less than 15 recent railroad bankrupts." Mr. Young identified the firm's Davis as John W. Davis, who was Democratic nominee for the Presidency in 1924, and then told his audience not to believe that "political lightning can not strike twice in the same place."

Reviews C. & O. Control Fight—"Who," he went on to ask, "is to be our next Republican secretary of State? Why, Mr. [John F.] Dulles of Sullivan & Cromwell, counsel to Kuhn Loeb, Dillon Reed, and numerous railroad bankrupts or alleged bankrupts, including B. & O." Mr. Young, as he put it, was "not questioning Mr. Dulles' integrity, for he is chairman of the Federal Council of Churches"; but he went on to suggest that a man with all Mr. Dulles' responsibilities "can hardly be expected to know what his left hand doeth."

The C. & O. chairman continued to say that Mr. Dulles had organized a movement against the Chesapeake Corporation-Alleghany Corporation merger in 1937, which "set me back on my heels just about five years." Mr. Young added that when he had won the resultant proxy fight, his opponents persuaded the I. C. C. "to bring action against us for taking illegal control of the C. & O. lines." On the latter score, it was Mr. Young's position that "under the intentions of Congress there could be no illegal control of our three C. & O. carriers, for the commission

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itself had specifically approved their joint operation" and the "joint directorships" of himself and his associate, Allan P. Kirby. "Furthermore," he added, "if we were recapturing control in 1942, then Morgan-Guaranty must have first taken it from us illegally in 1938. But did that bother the commission?"

The C. & O. chairman gave additional details of this fight which he won when the commission "was forced to yield to public opinion, agreeing most reluctantly to let us stay in C. & O. if we would deposit the voting power of the Alleghany's other railroad stock—with an approved bank."

To show, he said, "how solicitous the commission really is of the public interest," Mr. Young next told of the complaint Alleghany filed last year, asking the commission to institute an investigation for the purpose of determining whether Guy A. Thompson, trustee of the Missouri Pacific, and Frank A. Thompson, trustee of the St. Louis-San Francisco, were violating the Interstate Commerce Act's section 5 which relates to combinations and consolidations of carriers. He suggested that the M. P. and Frisco comprise a "classic example of competing carriers," and he called the Thompsons "two septuagenarian political lawyers, partners and brothers."

"Dropped" Thompson Case — The C. & O. chairman also noted that those two roads serve the Southwest "out of St. Louis—Mr. Truman's and Mr. Prendergast's home state." And he reported the final disposition of the case in this way: "Finding no support from Mr. Truman and having a better way to spend our money than in an idle pantomime, we dropped the case—and so did the commission. But there the Thompson brothers sit—just as Mr. Harriman sits, immune to prosecution—and our self-styled statesmen have the crust to display the scales of justice on our public buildings."

This reference to Secretary of Commerce W. Averell Harriman was a flashback to Mr. Young's earlier comment on the former Union Pacific chairman's role in the framing of the so-called Western Agreement which comprises part of the government's evidence in the so-called Lincoln anti-trust complaint against western roads, the A. A. R. and various individual railroad executives. Mr. Harriman was not among those named in the government complaint.

Meanwhile, the speaker had also given "some further idea" of the "ramifications of the railroad lobby" when he asserted that it employs 1,800 "outside" lawyers. "If every political lawyer in the nation is not a railroad lawyer, it can be safely said that he aspires to be," Mr. Young added. He went on to recall that, in the article which he wrote for the December, 1946, issue of the Atlantic Monthly, he had characterized railroad reorganizations as "the greatest financial fraud in history," complaining that Congress' intent, in enacting section 77 of the Bankruptcy Act to "bring relief to millions of small investors," had been "callously reversed by clever Wall Street lawyers with the help of the I. C. C. and R. F. C. to do exactly the opposite, to 'gyp' them—all for voting

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trusts and the melons that grow out of them. And, if you prefer, you can spell Mellon with two I's."

Sees "Railroad Lobby" in Power—

Here Mr. Young interpolated into his prepared speech a charge that the Mellon interests were behind the Virginian's recent intervention in I. C. C. proceedings wherein he and C. & O. President R. J. Bowman are seeking authority to serve as directors of the New York Central and the C. & O. is seeking a release of its recently-acquired N. Y. C. stock from voting trusteeship. He then referred again to the Atlantic Monthly article, recalling that it had also said "that this railroad lobby is stronger than the government, that it dictates foreign and domestic policy."

"In further proof," Mr. Young continued, "examine with me the Georgia rate case. There the railroads averred to the Supreme Court in their music hall chorus that there could be no rate discrimination because the I. C. C. fixed the rates, and was above suspicion. Then, when the I. C. C. succumbed to pressure and reduced class rates 10 per cent in the South and West, and increased them 10 per cent in the North, thus admitting discrimination, what happened? Did the railroads still support the commission? No. Promptly 32 western railroads and the great state of New York enjoined the decision—and the discrimination persists. A strange alliance in the rate controversy, don't you think, 32 western railroads lined up with New York state?"

"We can only guess what Mr. Dulles had to do with this lightning-like cooperation between New York state, and New York banker Harriman's western domain of 32 roads which the latter organized into the tightest non-competitive secret combine in history away back in 1932—a combine so tight that the member roads, among many other normal freedoms, were forbidden to advertise in newspapers."

Answers Questions—

During the question period which followed his address, Mr. Young was asked if the railroads could retain an effective "rate advantage" over the air lines. He replied that in his opinion rail and air fares are now so close that they affect the traveler's choice of one agency over the other less than 10 per cent as much as do such things as courtesy and other service factors. He also said that proposed railroad fare increases would not drive traffic to the air lines, provided the railroads spend some of the additional revenues for improvements.

Telling of the Pere Marquette's experience under its no-tipping rule, Mr. Young said that the combination of that, better dining service, and new equipment had brought a 76 per cent increase in the Detroit, Mich.-Grand Rapids passenger business handled by that road's streamliners—the "Pere Marquettes." This new business, he explained, came from the highways and was not taken from other P. M. trains.

In response to other questions, the C. & O. chairman indicated again his opposition to the present form of the pending Reed-Bulwinkle bill to stay the

operation of anti-trust laws with respect to carrier rate-making procedures and other joint actions approved by the I. C. C. He was asked if enactment of the bill would "end car shortages and the rigging of rates against the West and South," and he replied that the enactment "would safely perpetuate both." Meanwhile, he had praised Colonel J. Monroe Johnson, director of the Office of Defense Transportation, who was present, for having "courageously advocated" a \$2 per diem rate for the rental of freight cars—a matter about which Mr. Young had previously made a statement to the so-called "Western Caucus" of congressmen, as noted elsewhere in this issue.

Faricy Issues Reply to Robert R. Young

(Continued from page 1049)

Mr. Young "can make all the answer that is necessary"; so he proceeded to make the remainder of his reply an answer to the attack on the railroad industry and the A. A. R. With respect to the per diem rate for freight car hire, which Mr. Young had criticized as too low, the Faricy statement revealed that the railroads are now voting on a proposal of the A. A. R. board of directors that the charge be increased from \$1.15 to \$1.25 per day, "pending completion of more exact studies of the cost of owning freight cars, now in progress."

Mr. Young told the caucus, composed of members of the House of Representatives from 19 western states, and headed by Representative King, Democrat of California, that Congress should instruct the I. C. C. to "quit fanning around and increase the per diem rate to \$2." Declaring that the increase would result in "only a slight bookkeeping item" for the railroads, Mr. Young noted that the per diem rate remained at \$1 for 25 years until 1945, when it was increased to \$1.15 daily.

"Since 1920," he continued, "the cost of building a car has more than doubled and the cost of repairing a car has nearly doubled. In 1920, these railroads owned 2,322,000 cars. Today, they have available only 1,760,000 cars. The fact that there has been a shortage of many types of cars is, of course, directly related to the failure of the railroads to progress since 1920 in meeting the simple economics of the car situation.

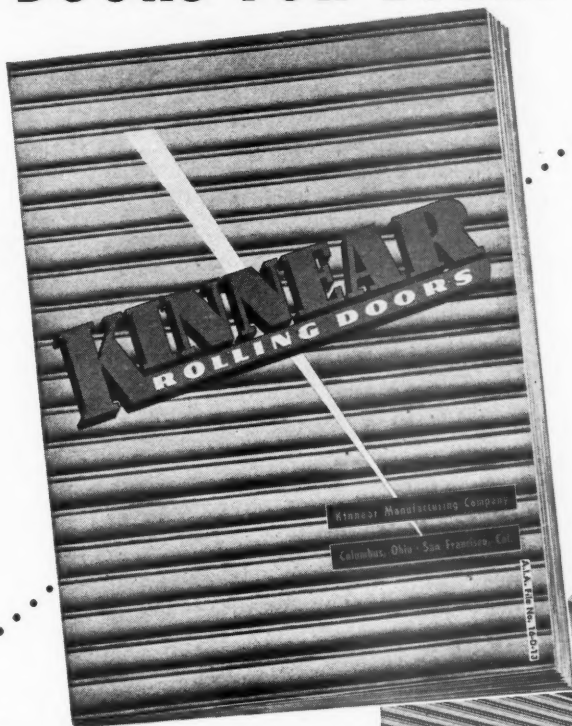
Incentive to Buy Cars—"If the rental received from a car is less than the cost of owning that car, those railroads which control the return of empties have the incentive to reduce their own purchases of cars and to depend upon the diversion of the cars of other railroads to their own lines. The more acute the shortage becomes the greater the incentive is to delay the return of the car to its owner. Victim railroads, not getting their cars back, and paid an inadequate rental, also have the incentive to stop purchasing cars."

According to Mr. Young, R. J. Bowman, president of the C. & O. and a former A. A. R. director, wrote the president of the association in June, 1946, "urging that the per diem rate on cars be increased to at least \$1.56 per day, which careful

40

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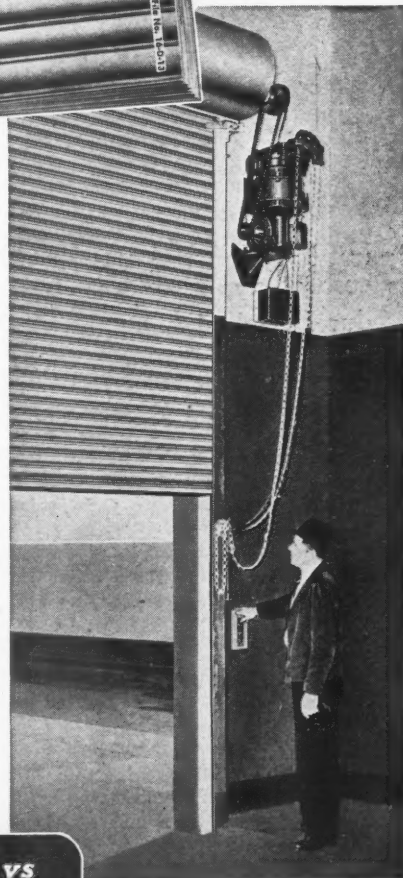
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students concluded was the out-of-pocket cost of owning a car." After noting that Mr. Bowman also conferred several times with "the president of the association and its dominant directors on this subject so vitally important to the public interest," Mr. Young said that the president replied in part that "unquestionably car ownership cost has increased substantially and is still rising."

"This run-around and insult to the public interest was one of the reasons why our C. & O. withdrew from the Association of American Railroads on October 15, 1946," Mr. Young declared.

The C. & O. chairman also, told the caucus that while the supply of cars owned by the railroads has decreased 24 per cent since 1920, fleets of privately-owned tank cars and refrigerator cars have increased 43 per cent from 187,000 cars in 1920 to 268,000 at the present time. Declaring that a large part of the latter equipment is owned "not by the railroads, but by businessmen," Mr. Young said that these owners charge for their cars on a mileage basis and "see to it that they are returned promptly." "Here, where private competitive enterprise has a chance to operate," he continued, "the combined fleet of refrigerator and tank cars has increased."

I. C. C. an "Echo"—"You would think," Mr. Young said, "that after several years of car shortages and the growing volume of protest... the Association of American Railroads would be doing something about it besides issuing confusing statistics. You would also think that the... commission, which is charged with the public interest in such questions, would also do something about it besides echo the reverberations of the association. But what do we get?"

At this point, Mr. Young referred to recent denials by A. A. R. President Faricy that eastern railroads "dominate" the association.

"One must laugh who knows anything about the affairs of the Association of American Railroads," Mr. Young remarked. "Ever since the association was formed important committees and decisions have generally stemmed from the chief executives of the two dominant eastern railroads, the New York Central and the Pennsylvania, and their ally, the Harriman-dominated Union Pacific."

Mr. Young charged that it was "unfair and misleading" for the A. A. R. to blame the present car shortage on the lack of steel for the production of new cars. He said that J. J. Pelley, late president of the A. A. R., was among those making presentations to the Stettinius Strategic Resources Committee before the war, when that group was urging the railroads to purchase new cars, and the "banker-controlled railroads" were saying that "Mr. [E. R.] Stettinius was all wet and that there was plenty of cars."

Fears Government Control—Contending further that "you aren't going to get any new cars if they continue to be rented for less the cost of carrying them," Mr. Young indicated his view that the public will soon demand that the government take over the railroads as a means of increasing the car supply. "That would be a dreadful thing," he said, "but the railroads are going that way mighty fast."

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A. R.'s budget is contributed by the N. Y. C., the P. R. R. and the U. P., Mr. Young added that "aside from the dollar diplomacy these three railroads can thus assert in the A. A. R., they also have vast power of coercion over other railroads by virtue of their control over some of the most important terminals in the nation."

"Member roads have nominal voting rights in the A. A. R. which are based on gross revenues for some things," he continued. "On the question of car movement, the vote is cast on the number of cars owned, and in that case the three banker-controlled roads, which represent 35 per cent of the gross revenues, own 25 per cent of the cars. Nominal voting arrangements do not mean anything, because most of our railroad presidents are appointed out of New York. So when it comes to voting, there are usually inclined to vote along with Mr. [M. W.] Clement, Mr. [Gustav] Metzman and the president of the Union Pacific, one of the great evils of the A. A. R. Unless they get unanimous agreement, they usually refrain from action. Now that is why this car service thing has stayed at \$1 for 25 years. They wouldn't want to hurt his feelings if one man dissented, so they wouldn't make a change." Before they vote, they know what the action will be. When the A. A. R. tells you something, take it with a grain of salt.

"These railroads also enjoy a far greater proportion of passenger business than they do freight business. Their influence in the A. A. R. and on the railroad economy as a whole is even greater than indicated by their share of the A. A. R.'s expenses which are divided between members on the basis of gross revenues. We find that of total railroad passenger revenues in the 11 years, 1930-40, the New York Central, Pennsylvania and Union Pacific constituted 35 per cent. This dominant influence of the three banking-controlled railroads will also assert itself in the new Pullman company, of which they will own 36 per cent."

Sees "New York" Dominant — Mr. Young told the caucus that he would be "pretty much surprised" if it could find "two or three railroad presidents who would come along and testify along the same lines as I." Adding that both the appointment of railroad presidents and the movement of cars are "generally controlled out of New York," Mr. Young remarked that "you don't expect the dog to bite the hand of the man who feeds him."

The C. & O. chairman said that the railroads are financed by the "widows and orphans of America who are being gypped right now out of their own investments by bad railroad administration from the railroad managements, the Interstate Commerce Commission and other people who put through wage increases years in advance of a rate increase." At this point, he observed that while wages have increased 76 per cent between 1933 and 1946, the I. C. C. "debated three years" as whether the rates should go up one per cent. "That is maladministration of the railroads," he said, adding that the I. C. C. was the "ranking member of the confederacy to blame."

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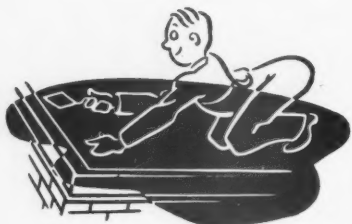
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Among other things, Mr. Young charged that the I. C. C. and A. A. R. "act hand in glove" on major questions of railroad policy. In developing this allegation, he cited the appointment of W. C. Kendall, chairman of the A. A. R.'s Car Service Division, as agent of the I. C. C. in car service matters. Mr. Young also later referred to Mr. Kendall as an employee of "three New York banks" in addition to the I. C. C. and A. A. R. He said further that there is an "incentive" in the "eastern group" to see that there are not enough freight cars in the country. "By controlling the number of cars, they can control the economy of the country," he added.

In his departures from the subject of car supply, Mr. Young made in somewhat more detail many of the charges and pronouncements embodied in the address he delivered later the same day at the National Press Club, as reported elsewhere in this issue. In making his reply, in the public statement he issued that evening, A. A. R. President Faricy, who was present at the caucus session, said that he would have preferred to have answered "directly before the same group of congressmen before whom Mr. Young delivered his tirade"—but "opportunity has not yet been offered me to do this." Meanwhile, the A. A. R. president was determined that the Young "slanders" should not go unnoted.

Faricy Reviews History—"When Mr. Young touches upon the railroad business," Mr. Faricy said, "he makes a claim to public credence on the ground that he is a railroad man who professes to be the representative of the idea of 'owner-management' of railroads. Mr. Young is not a representative of railroad ownership management. Ten years ago he acquired, for a personal investment of \$254,295.92, control of a holding company, originally created by the late Van Swerigen brothers, which, in turn, controlled railroad properties estimated to be worth more than two billion dollars. The transaction was described by Mr. Young himself, when questioned by Senator Burton K. Wheeler, as one wherein the public puts up the money, and the private investor or private capitalist, if you will call it that, holds control for a very small amount of money.

"Mr. Young further testified before Senator Wheeler's committee that 'it was a bad thing for any individual to have such power.' He felt that it would be desirable to eliminate holding companies from the railroad field and stated that he did intend to eliminate the Alleghany holding company which he controlled, and to receive instead a small minority stock interest in the railroads which it dominated. That was 10 years ago, but this intention has not been carried out. Mr. Young continues to control the Chesapeake & Ohio with an infinitesimally small ownership, and yet sets himself up as the champion and spokesman of ownership management."

Mr. Faricy said that Mr. Young's statements about the freight car supply and distribution, the control and direction of the A. A. R. and its relationship to governmental bodies and individuals mentioned by the latter were "almost without exception, either twisted deformations of the

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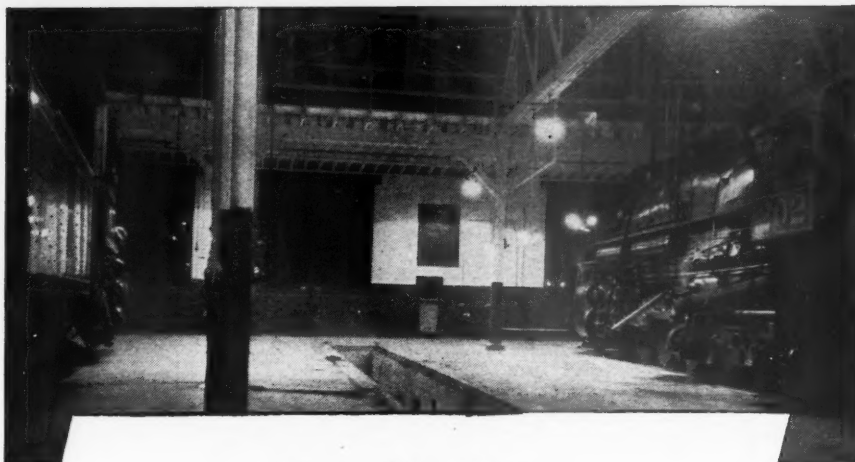
truth or bare and bald assertions, without relation to fact and unsupported by evidence." Charging that Mr. Young found "almost no time" to discuss the distribution of freight cars, particularly as between the eastern and western roads, Mr. Faricy said that the C. & O. chairman instead "resorted to a repetition of empty assertions."

Discrimination Denied—Among other things, Mr. Faricy denied that (1) any section of the country is discriminated against by the A. A. R. in the distribution of freight cars; (2) the A. A. R., or the railroad industry, is dominated by any three railroads or any three New York banks or bankers or anyone else other than the responsible managements and owners of the railroads; (3) there are any "preferred" or "victim" railroads in the distribution of freight cars; and (4) the railroads "or anyone else" have deliberately and for the purposes of economic control and stangulation brought about a reduction in the number of freight cars and a shortage in their supply.

After explaining the duties of Mr. Kendall, Mr. Faricy said that "the act of Congress conferring jurisdiction over car service matters upon the I. C. C. authorizes the commission to use such outside agencies as it finds advisable." "The natural and efficient thing to do," he added, "obviously is to use the existing and experienced machinery, rather than to set up on an emergency basis a duplicate, necessarily inexperienced." With respect to A. A. R.'s pending vote to increase the per diem rate, Mr. Faricy commented that some roads think the \$1.15 rate is too high while others think it is too low; but "whatever the final rate may be, insofar as the A. A. R. is concerned, it will be established by the majority of its members."

"Mr. Young made much of the fact that there are fewer freight cars in service today than there were in 1920," Mr. Faricy concluded. "That is true. It is, indeed, one of the measures of improvement in railroad efficiency that with these fewer cars a heavier freight traffic is being hauled at a lower cost, and with less shortage and congestion than was hauled then. This is because the cars, while fewer, are bigger, better, stronger, more efficient and more efficiently handled. In other words, although there are fewer cars today than there were in 1920, the railroads can haul more tons of freight more miles per day. However, the railroads are making every effort to increase their stock of cars."

"The present car shortage, which is felt ... in all sections of the country, is an inevitable result of war conditions. The railroads are taking every possible step to remedy the situation. They have more than 100,000 cars on order, with another 30,000 programmed for order in the near future. This is more cars than can be built during the next year even if the hoped-for level of production of 10,000 cars per month is attained. In considering the shortage of railroad cars, it should be borne in mind that there is now and has been since the close of the war a general shortage of goods, materials and services in this country. The shortage in rail transportation has been less than that in most industries."



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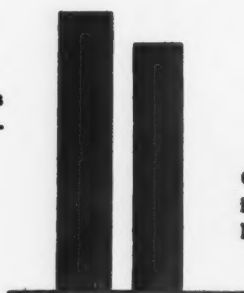
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